S. HRG. 100-316

FEDERAL ENERGY MANAGEMENT IMPROVEMENT ACT

HEARING

BEFORE THE

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

S. 1382

TO AMEND THE NATIONAL ENERGY CONSERVATION POLICY ACT TO IMPROVE THE FEDERAL ENERGY MANAGEMENT PROGRAM AND FOR OTHER PURPOSES

JULY 30, 1987

Printed for the use of the
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FEDERAL ENERGY MANAGEMENT IMPROVEMENT ACT

THURSDAY, JULY 30, 1987

U.S. SENATE,
SUBCOMMITTEE ON ENERGY REGULATION
AND CONSERVATION,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:15 a.m., in room SD-366, Dirksen Senate Office Building, Hon. Howard M. Metzenbaum, presiding.

OPENING STATEMENT OF HON. HOWARD M. METZENBAUM, A U.S. SENATOR FROM THE STATE OF OHIO

Senator METZENBAUM. I'm sorry we're a few minutes late. And I appreciate the cooperation of those of you who changed your schedule so we could start earlier, and then I'm a little late myself. So, I apologize for that.

Today the Subcommittee on Energy Regulation and Conservation will receive testimony on S. 1382, legislation to improve the Federal Government's Energy Management Program. A second objective of this hearing is to oversee the Federal Government's effort to implement Title VIII of the National Energy Conservation Policy Act concerning shared savings contracts.

The Federal Government is both the largest energy user and the largest landlord in this Nation. Each year the government spends nearly $4 billion for energy used in its 500,000 buildings, $2 billion for energy used in public housing, $400 million for gasoline used in its passenger vehicles. In my own State of Ohio, for example, the Department of Defense alone has an annual utility bill of nearly $35 million.

Department of Energy experts estimate that the government can reduce its energy bill by 25 percent and save over $1 billion annually by investing in the most economical energy conservation projects, those that have a payback period of five years or less.

Obviously, at a time of budget austerity, it's difficult to find the funds necessary to finance energy conservation projects. To address this problem, last year Congress authorized the use of private funds to finance energy savings projects. However, it has been 15 months since enactment of that authority and not a single private dollar has been tapped.

S. 1382 has been designed to provide further incentives for Federal energy efficiency by establishing conservation targets, incentive programs, and in some cases specific conservation requirements.

I would have hoped, frankly, that an administration which prides itself on promoting government efficiency and privatization would not have to be prodded into saving taxpayer funds through energy conservation.

However, its efforts to date have been unproductive. In fact, this administration has been adopting policies, which instead of reducing Federal energy costs and saving tax dollars, are actually increasing government inefficiency and the waste of increasingly scarce Federal dollars. For example, two policies adopted during the energy crisis of the 1970s, efficiency standards for Federal automobiles and Federal building thermostat settings, have both been weakened by executive order. Hurray for the President.

Such policies simply do not make sense. The energy crisis remains a continuing threat to our Nation, and we face an equally serious budget crisis. Yet, this administration using the old argument of reducing regulation is eliminating standards designed to reduce Federal energy demand and thereby help to balance the budget.

Let me say, ladies and gentlemen, that when I spoke to representatives of the administration yesterday and I was told that the administration believes that the free marketplace ought to prevail, I started talking to myself because I couldn't understand what they were talking about—the free marketplace with respect to government.

This government's policies are absurd in this area. And for the President of the United States to run all over the country making speeches about balancing the budget, send me this and send me that, and I'll veto it and then not do anything on his own—economy and efficiency starts at home.

And it starts at the doorstep of the President of the United States. And it goes from there to the OMB. I say to you publicly the OMB is irresponsible. I say to you that the President is not meeting his commitment to the American people.

There will be no great television lights and no great press here today, but before many weeks go by, we will make this issue into a public issue. Stupidity does not deserve to be swept under the rug. And this policy is a stupid policy. It's a stupid policy because we have a chance to save dollars. We have a chance to save energy, and somebody tells me, well, we've got to let the free marketplace prevail.

I came from the free marketplace. I came from the business world. I understand what that is all about. It has got nothing at all to do with this. This policy just doesn't make any sense on the part of the government. I find it incredible. I cannot believe that that is the policy that our government is following.

Why does the government not voluntarily adopt energy-efficient and cost-effective measures? Why does this administration not try to set an example by cutting wasteful practices? The legislation before us today will promote energy efficiency in the Federal Government and save valuable taxpayer dollars.

I am eager to hear the testimony of the witnesses before us here today. I respect each of you as government employees and government officials. I want to work with you. We are prepared to work with you. But I think it is time that you buck upstairs the fact that the policies of this administration don't make good sense and aren't very realistic and aren't very fair to the American people.

Now that I got that off my chest, I will be glad to hear from the witnesses. The first panel of witnesses will be from the administration. I would like to ask that you summarize your statements so that we can have more time available for questions. Your entire statements will be made a part of the record. This committee normally follows the five minute rule, and the light will go on at that time.

Who is our first witness? Ms. Fitzpatrick, happy to hear from you.

[A prepared statement of Senator Evans and the text of S. 1382 follow:]

Statement of Senator Daniel J. Evans
Subcommittee on Energy Regulation and Conservation
Committee on Energy and Natural Resources

Hearing on S. 1382 - Federal Energy Management Improvement Act

July 30, 1987

Mr. Chairman, I appreciate your leadership in scheduling this hearing on S. 1382, the Federal Energy Management Improvement Act, of which I am a original cosponsor.

I am both pleased yet terribly disappointed that we are here today -- pleased that this Subcommittee is again taking the lead in directing the Federal Government to implement cost-effective energy conservation efforts and disappointed that the Administration has done so little to utilize existing opportunities for dramatic improvements in energy efficiency.

While we now see world petroleum prices still well below the levels of only two years ago, I do not believe that we should allow ourselves to turn away from the fact that our nation depends on limited energy resources. I agree with much of the analysis of our domestic energy situation contained in Department of Energy's recent report on the nation's energy security. Although I have serious reservations over the recommendations in the report, I am a firm believer that our national energy policy is an integral component of our nation's security. I am therefore seriously concerned over our current energy policy and the problems that await us in the future.

Recent events in the Persian Gulf are an indication of the precarious condtions affecting much of the world's existing oil supplies, and other energy resources have their own unique problems. Nuclear power is demonstrating itself to be an increasingly expensive option, with no new orders for commercial reactors in nearly 10 years. While the nation possesses abundant supplies of coal, the environmental impact of coal plants has been called into question and mitigation efforts are expensive. In my own state, we have benefitted from relatively cheap hydroelectric power, but there are also environmental consequences accompanying this option, including severe damage to native fish runs, an issue which is only now being addressed. Progress in renewable energy technology is promising, but in most cases, not yet commercially viable.

It is high time that both the Congress and the Administration recognize what many utilities and power planning

agencies already appreciate -- that conservation is a cost-effective energy resource which can be utilized without the long delays or extraordinary financial investments required by most other energy options.

During my tenure as Chairman of the Northwest Power Planning Council, the Council developed its least-cost planning policy and it became apparent that increasing energy efficiency on a regional basis was the most attractive option for meeting the energy needs of the Northwest from both a financial and environmental standpoint. The decision to utilize increased energy efficiency as a energy resource has by no means been confined to the Northwest, and in several states, energy planners have turned to energy conservation to meet changing needs. I am aware that Michigan has been a leader in this area, and I look forward to the testimony we will hear today from the representative of the Michigan Public Service Commission.

As the single largest landlord and energy user in the country, the Federal Government should take the lead in responding to the nation's future energy needs. I joined with Senator Johnston in offering an amendment to the 1986 Reconciliation legislation which authorized federal agencies to enter into "share the savings" contracts. This allows agencies to utilize private funds to finance projects to increase energy efficiency, with investors receiving repayment from the money saved by lower energy costs. Yet as of today, it appears that no such contracts have been signed by the Federal Government.

S. 1382 builds on earlier proposals adopted by Congress, providing further incentives to adopt cost-effective energy conservation improvements by allowing agencies to retain a portion of the dollar savings which result from such efforts. Additionally, the bill would re-establish federal building temperature regulations and federal automobile fleet fuel economy requirements which the Administration has unwisely abandoned. The bill also contains important provisions which should promote better inter-departmental communication and cooperation in achieving energy savings.

As a member of the Senate Energy and Natural Resources Committee, I have listened to countless witnesses come before us to argue that without action on our part, we could face a severe energy crisis as early as the next decade. It is my hope that we will respond aggressively to this critical challenge, and I believe that the first place we should start is in ensuring that the Federal Government set the example of responsible and efficient use of energy. I expect that today's hearing will provide us with important information to lead us in that direction.

II

100TH CONGRESS
1ST SESSION

S. 1382

To amend the National Energy Conservation Policy Act to improve the Federal Energy Management program and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 17, 1987

Mr. METZENBAUM (for himself, Mr. JOHNSTON, Mr. EVANS, and Mr. FOWLER) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To amend the National Energy Conservation Policy Act to improve the Federal Energy Management program and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Federal Energy Management Improvement Act".

SEC. 2. (a) Title V, part 3 of the National Energy Conservation Policy Act (42 U.S.C. 8251–8261) is amended to read as follows:

"PART 3—FEDERAL ENERGY MANAGEMENT

"SEC. 541. FINDINGS.

"The Congress finds that—

"(1) the Federal Government is the largest single energy consumer in the Nation;

"(2) the cost of meeting the Federal Government energy requirement is substantial;

"(3) there are significant opportunities in the Federal Government to conserve and make more efficient use of energy through improved operations and maintenance, the use of new energy efficient technologies, and through the application and the achievement of energy efficient design and construction;

"(4) Federal energy conservation measures can be financed at little or no cost to the Federal Government using private investment capital made available through performance contracts as authorized by title VIII of the National Energy Conservation Policy Act; and

"(5) an increase in Federal Government energy efficiency would benefit the Nation by reducing the cost of government, reducing national dependence on foreign energy resources, and demonstrating the benefits of greater energy efficiency to the Nation.

"SEC. 542. POLICY.

"It is the policy of the United States that the Federal Government has the opportunity and the responsibility, with the participation of industry, to promote the efficient use of energy by the Federal Government.

"SEC. 543. PURPOSE.

"It is the purpose of this part to promote the conservation and the efficient use of energy by the Federal Government.

"SEC. 544. DEFINITIONS.

"For the purposes of this part—

"(1) The term 'agency' has the meaning given it in 5 U.S.C. 551(1).

"(2) The term 'community of Federal buildings' means a collection of Federal buildings including but not limited to a National laboratory, a military base, buildings which are only part of a National laboratory or military base, and the energy consuming support systems for those building collections.

"(3) The term 'construction' means construction and substantial retrofitting or renovation.

"(4) The term 'energy conservation measures' means measures that are applied to a Federal building or community of Federal buildings that improve life cycle cost efficiency and that involve energy conservation, cogeneration systems, renewable energy sources,

improvements in operations and maintenance efficiencies, or retrofit activities, such as architectural improvements, daylighting, and high efficiency lighting. The term includes modifications to a building or equipment.

"(5) The term 'energy survey' means a procedure to be used in determining energy and cost savings likely to result from use of appropriate energy related maintenance and operating procedures and modifications, including the purchase and installation of particular energy-related equipment, and use of renewable energy sources.

"(6) The term 'Federal building' means any building, structure, or facility which is constructed, renovated, leased, or purchased in whole or in part for use by the United States, and which consumes energy during the reporting period.

"(7) The term 'life cycle cost' means the total costs of owning, operating, and maintaining a building over its useful life, including such costs as fuel, energy, labor, and replacement components, determined on the basis of a systematic evaluation and comparison of alternative building systems; except that in the case of leased buildings, the life cycle cost shall be calculated over the effective remaining term of the lease.

"(8) The term 'renewable energy sources' includes but is not limited to sources such as agriculture and urban waste, geothermal energy, solar energy, and wind energy.

"(9) The term 'cogeneration' means the sequential production of thermal and electrical energy; cogeneration applications will be limited to those approved under title VIII of NECPA.

"(10) The term 'performance contracting' means a contract underwhich energy conservation measures are installed at reduced or no cost to the government and subsequent payments are linked to energy savings. Total payments to the contractor over the term of the agreement should not be greater than the total energy savings achieved over the term of the contract, or in the case of cogeneration projects, no greater than the government's avoided energy cost. Examples of performance contracting include, but are not limited to, shared savings, guaranteed leasing, guaranteed installment sale and discounted energy prices for energy produced by cogeneration.

"(11) The term 'Secretary' means the Secretary of Energy.

"SEC. 545. ESTABLISHMENT AND USE OF LIFE CYCLE COST METHODS.

"(a) ESTABLISHMENT OF LIFE CYCLE COST METHODS.—The Secretary, in consultation with the Director of the Office of Management and Budget, the Secretary of Defense, the Director of the National Bureau of Standards, and the Administrator of the General Services Administration, shall—

"(1) establish practical and effective methods for estimating and comparing life cycle costs for Federal buildings or communities of Federal buildings, using the sum of all capital and operating expenses associated with the energy system of the building involved over the expected life of such system or during a period of twenty-five years, whichever is shorter, and using average fuel costs and discount rate as determined by the Secretary; and

"(2) develop and prescribe the procedures to be followed in applying and implementing the methods so established.

"(b) USE OF LIFE CYCLE COSTS.—In the design of new Federal buildings and communities of Federal buildings, and the application of energy conservation measures to existing Federal buildings and communities of Federal buildings, selection of design or conservation alternatives by the Federal Government shall be made using life cycle cost methods

and procedures established under subsection (a) of this section.

"(c) USE IN NON-FEDERAL STRUCTURES.—The Secretary shall make available to the public information on the use of life cycle cost methods in the construction of buildings, structures, and facilities in all segments of the economy.

"SEC. 546. BUDGET TREATMENT FOR ENERGY CONSERVATION MEASURES.

"Each agency, in support of the President's annual budget request to the Congress, shall specifically set forth and identify funds requested for energy conservation measures under section 550.

"SEC. 547. LEASED BUILDINGS.

"In leasing buildings for its own use or that of another agency, each agency shall give appropriate preference to buildings which minimize life cycle costs through the use of energy conservation measures.

"SEC. 548. INCENTIVES FOR AGENCIES.

"Each agency shall establish a program of incentives that uses internal resources to encourage that agency to conserve and make more efficient use of energy. Such a program shall consist of arrangements in which the managers of Federal buildings or communities of Federal buildings of the agency retain a portion of the dollar savings which result from their energy conservation measures to undertake further

conservation measures. An additional portion may be retained for furthering the objectives of that agency.

"SEC. 549. INTERAGENCY ENERGY MANAGEMENT TASK FORCE.

"(a) In order to assist the interagency committee organized under section 656 of the Department of Energy Organization Act (42 U.S.C. 726?) to coordinate the activities of the Federal Government in promoting energy conservation and the efficient use of energy and inform non-Federal entities of the Federal experience in energy conservation, an Interagency Energy Management Task Force, referred to in this section as the 'Task Force', shall be established.

"(b) The Task Force shall be composed of the chief energy managers of the Departments of Energy, Defense, Transportation, Agriculture, Interior, Justice, Health and Human Services, and Housing and Urban Development; the Postal Service; the Veterans' Administration; the General Services Administration; and the National Aeronautics and Space Administration. The Assistant Secretary of Energy for Conservation and Renewable Energy shall be the Director of the Task Force and may request the participation of any other agency or office as is deemed appropriate.

"(c) The Task Force shall meet when the Director requests, but not less often than twice a year, to assess the progress of the various agencies in achieving energy savings;

to collect and disseminate to agencies, States, local governments, and the public, information on effective survey techniques, innovative approaches to the efficient use of energy, incentive programs developed under section 548, innovative performance contracting methods, the use of cogeneration and renewable resources, and other information and technologies that would promote the conservation and the efficient use of energy; to coordinate energy surveys conducted by the agencies; to develop options for use in conserving energy; and to report to the committee organized under section 656 of the Department of Energy Organization Act (42 U.S.C. 7266).

"SEC. 550. ENERGY MANAGEMENT GOALS.

"(a) ENERGY PERFORMANCE GOAL FOR FEDERAL BUILDINGS.—Each agency shall apply energy conservation measures to and shall improve the design for the construction of its Federal buildings and communities of Federal buildings so that the energy consumption per gross square foot of its Federal buildings and communities of Federal buildings in use during the fiscal year ending September 30, 1995, is at least 10 per centum less than the energy consumption per gross square foot of its Federal buildings and communities of Federal buildings in use during the fiscal year ending September 30, 1985.

"(b) IMPLEMENTATION STEPS FOR FEDERAL BUILDINGS GOAL.—To achieve the goal set in subsection (a), each agency shall—

"(1) prepare or update a plan describing how the agency intends to meet the goal including designation of staff and identification of high priority projects;

"(2) perform energy surveys of its Federal buildings and communities of Federal buildings to the extent necessary for implementation of this section;

"(3) using the results of the energy surveys, apply to its Federal buildings and communities of Federal buildings the most life cycle cost-effective energy conservation measures in accordance with the methods and procedures specified in section 545;

"(4) among federally funded measures, give priority to those having the highest savings to investment ratio, and

"(5) among measures accomplished with private investment capital, give priority to those having the highest estimated net benefit to the government; and

"(6) ensure that any operation and maintenance procedures applied are continued."

"(7) maintain temperature control devices in Federal buildings and communities of Federal buildings in conformance with the requirments of 41 Code of Fed-

eral Regulations 101–20.116 in effect on July 1, 1986; and

"(c) ENERGY PERFORMANCE GOAL FOR FEDERAL PASSENGER AUTOMOBILES.—(1) Each agency shall apply appropriate procurement, operations, and maintenance policies to its passenger automobile fleet so that the fleet's energy consumption per mile driven during the fiscal year ending September 30, 1995, is at least 10 per centum less than the energy consumption per mile driven during the Fiscal Year ending September 30, 1985.

"(2) For purposes of this subsection the term 'passenger automobile' has the meaning given it in section 501(2) of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2001(2)), except that the term does not include automobiles designed to perform combat related missions for the Armed Forces or designed to be used in law enforcement or emergency rescue work.

"SEC. 551. REPORTS.

"Each agency shall periodically furnish the Secretary with complete information on its activities under this part; on its progress in achieving the goals set in section 550; on the incentives, activities, and result of its program conducted under section 548; on obstacles encountered and recommendations to overcome such obstacles; and on its progress in achieving the goals established in the Federal Ten Year Plan

required by section 381(a)(2) of the Energy Policy and Conservation Act. The Secretary shall report annually to Congress on all activities under this part on the progress made toward achievement of the objectives of this part.".

SEC. 3. Section 101(b) of the National Energy Conservation Policy Act (the Table of Contents) is amended to read as follows:

"PART 3—FEDERAL ENERGY MANAGEMENT

"Sec. 541. Findings.
"Sec. 542. Policy.
"Sec. 543. Purpose.
"Sec. 544. Definitions.
"Sec. 545. Establishment and use of life cycle cost methods.
"Sec. 546. Budget treatment for energy conservation measures.
"Sec. 547. Leased buildings.
"Sec. 548. Incentives for Agencies.
"Sec. 549. Interagency Energy Management Task Force.
"Sec. 550. Energy Management Goals.
"Sec. 551. Reports.".

SEC. 4. Section 381(c) of the Energy Policy and Conservation Act (42 U.S.C. 6361(c) is amended to read:

"(c) The Secretary shall include in the report required under section 553 of the National Energy Conservation Act the steps taken under subsections (a) and (b) of this section.".

○

STATEMENT OF DONNA R. FITZPATRICK, ASSISTANT SECRETARY, CONSERVATION AND RENEWABLE ENERGY, DEPARTMENT OF ENERGY

Ms. FITZPATRICK. Thank you, Mr. Chairman. I do have a full statement for the record, and I would like to summarize it very briefly.

Senator METZENBAUM. Would you bring the mike a little closer please?

Ms. FITZPATRICK. Yes. Is it on?

Senator METZENBAUM. Thank you.

Ms. FITZPATRICK. Mr. Chairman, I appreciate the opportunity to appear before you today to discuss the Federal Energy Management Program and comment on provisions of S. 1382. The Department shares the committee's interest in improving energy efficiency in the Federal sector. As managers of the Federal establishment, it is incumbent upon us to operate our facilities in the most cost-effective manner.

We are pleased to report that progress has been made in this effort over the last several years. Between 1975 and 1985, agencies improved efficiency in Federal buildings by 16.6 percent on a Btu per gross square foot basis. And this was in a time when energy intensity was actually increasing largely because of the increased use of such things as office machinery. At the same time, the Federal Government reduced its use of petroleum in buildings by over 44 percent.

The efficiency of the Federal automobile fleet has also improved significantly. In 1986 Federal new passenger cars had an average fuel economy of 29.2 miles per gallon which significantly exceeded the CAFE standard.

Even with these accomplishments, there are still many opportunities to increase energy efficiency in Federal facilities and operations, especially through the use of the new authority to enter into shared savings contracts. The new authority provides not only an opportunity for the government to acquire energy saving improvements to Federal facilities at no cost to the government, but also a tremendous market for private sector goods and services.

Because of this great potential, Secretary Herrington has urged all agency heads to initiate shared savings contracts, and I have conducted a number of briefings for Federal agencies to help them get started. We are providing assistance for energy audits, for project design and for legal and procurement issues.

The response from the agencies has been enthusiastic, and we are learning how to overcome some barriers that still exist to the adoption of Federal shared savings contracts. These barriers include factors such as accurately quantifying preretrofit energy use and also some current procurement and contractual practices that do not anticipate the unique nature of energy performance contracting.

With regard to S. 1382, we share the committee's interest and objectives in making the Federal Government more efficient. We commend the committee's actions in deleting existing burdensome mandates requiring extensive Federal buildings to retrofit by 1990 and in providing the authority to the Secretary to set discount

rates in the light of current conditions and market rates. This will provide much more flexibility than allowed under the existing authorities.

While we believe that goals and incentive systems for increasing energy efficiency can be an effective means of guiding agency actions, the administration is opposed to specific mandatory goals which are not yet supported by a critical analysis.

The 656 Committee is currently studying the issue of whether the retention of some portion of savings would be an appropriate incentive for Federal managers to undertake more energy conservation measures. I also understand that there needs to be examination of the legal issues involved, and we will report back to the committee the findings of this study.

It is our belief that those provisions, if determined feasible, should be established through appropriate administrative mechanisms, such as an executive order.

The Federal regulations now in force are sufficient to maintain building temperatures within reasonable limits. The important point to emphasize here is not really lower temperatures in winter or higher temperatures in summer, but the proper operation and maintenance of efficient heating and cooling systems in Federal buildings. We need to provide reasonably comfortable working conditions, but we do not have to waste energy to do it. The FEMP program is aimed in large part at achieving such efficient well-operated systems.

We are convinced that shared savings contracting has great potential, and we will continue to work hard to insure its success.

Mr. Chairman, we appreciate the advice and the leadership of the committee on this matter. And we thank you for the opportunity to appear here today.

[The prepared statement of Ms. Fitzpatrick follows:]

STATEMENT OF

DONNA R. FITZPATRICK

ASSISTANT SECRETARY FOR CONSERVATION AND RENEWABLE ENERGY

U.S. DEPARTMENT OF ENERGY

BEFORE THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

UNITED STATES SENATE

July 30, 1987

Mr. Chairman:

Thank you for the opportunity to discuss the Federal Energy Management Program (FEMP) and comment on provisions of S. 1382, a bill to amend the National Energy Conservation Policy Act (NECPA) to improve Federal energy management. The Department shares the Committee's interest and objective of providing energy efficiency in the Federal sector, since the Federal sector represents the single largest consumer of energy in the U.S. -- using approximately 1.8 quads in 1986. Clearly, the managers of Federal buildings have an interest in operating these facilities in the most cost effective manner.

This morning I would like to provide the Committee with a historical perspective of FEMP's past direction and accomplishments, identify the opportunities and lessons learned from recent shared savings legislation, and comment on our approach to achieving energy efficiency in the future.

Background

Historically, because of the importance of the Federal sector as an energy end user, a variety of initiatives have been used to increase energy efficiency. The Energy Policy and Conservation Act (EPCA), the Energy Conservation and Production Act (ECPA) as amended, NECPA in 1978, as well as Executive Orders 11912, 12003 and 12375 have provided comprehensive tools and planning procedures that continue to shape Federal agency decisions on energy efficiency investment activities.

Results for the period 1975 to 1985 have been impressive. In response to goals established by Executive Order 12003, agencies have improved efficiency in

Federal buildings by achieving a 16.6 percent reduction in buildings energy computed on a Btu/GSF basis. In this same period, Federal agencies were able to cut their use of petroleum products in buildings by over 44 percent. This overall efficiency improvement and reduction of petroleum use in buildings is especially remarkable since Federal agencies such as DOD increased their mission requirements in this period and many agencies reported increases in their use of energy intensive equipment including computers, simulators, etc.

In the case of Federal vehicles, fleet average fuel economy standards were established in Title V, Section 510 of the Motor Vehicle Information and Cost Savings Act (15 U.S.C. 2010). The standards require that in any given year, the average efficiency of all Federal government purchases of passenger vehicles for its fleet, except combat, law enforcement, or emergency rescue vehicles, must either be not less than 18 miles per gallon or meet the Corporate Average Fuel Economy (CAFE) standard for that year, whichever is greater. In 1986 for the Federal automobile fleet, GSA reported new passenger vehicle fleet averages of 29.2 mpg, which exceeds the CAFE standard of 26.0 mpg.

Even with these accomplishments, there is significant opportunity to increase energy efficiency in Federal facilities and operations.

Federal Energy Conservation Shared Savings

Recent developments in the area of Federal energy conservation shared savings contracts authorized under the Consolidated Omnibus Budget Reconciliation Act (COBRA) which was signed by President Reagan in April 1986, represent a new approach for effecting energy conservation by bringing the private sector into partnership with the Federal government. There are several

advantages that could potentially result from the use of Federal energy conservation shared savings contracts. For the Federal government the most obvious is the provision of cost savings improvements by the private sector in Federal facilities.

In times of budget restraint Federal energy shared savings contracts can offer the Federal government both private sector capital and expertise to conduct energy conservation retrofits and improvements that might not otherwise be made due to limited availability of Federal funding. For the private sector, this arrangement offers a tremendous market for their goods and services and the incentive to share in and maximize the savings that result from the improvements. While shared savings projects have been conducted in the private sector, the introduction in the Federal establishment is new and will require a certain learning period before agencies develop the necessary procedures that simplify contract execution.

Because of the great potential offered by shared savings contracts, Secretary Herrington issued letters to the Heads of Federal agencies in November 1986 urging them to initiate shared savings contracts. Over a 3-4 month period through this spring I conducted briefings at 8 Federal agencies to explain the benefits of the legislation and provide technical assistance to expedite development of requests for proposals (RFPs) and analytical tools that would help agencies get underway. The response to this outreach effort has been generally positive. As a result of the briefings, three agencies -- U.S. Postal Service, HUD, and NASA -- have identified potential projects and are proceeding with solicitation development. In addition, the National Institutes of Health, part of Health and Human Services, has identified candidate projects and is in the planning stages of a pilot project.

In other related activities we have worked actively with the DOD and civilian agencies to help them in their shared energy savings efforts. For example, through the Office of the Secretary of Defense, we have tracked and coordinated the efforts of the military services in initiating shared energy savings projects.

In the case of the Navy, FEMP and its technical contractors have attended strategy meetings and the pre-proposal conference on the Navy's first shared energy savings Request for Proposal on Building 3400 at the Naval Training Center at Great Lakes, Illinois. FEMP is currently following the negotiations leading toward the Navy's initial shared savings contract. Additional Navy shared energy savings initiatives are already planned for the Naval Hospital at Long Beach, California, the Trident Training Activity at Bangor, Washington, and, after Building 3400, a follow-on basewide shared energy savings RFP for the Naval Training Center at Great Lakes, Illinois.

Immediately following the passage of the shared energy savings legislation in April 1986, the Department entered into an Inter-Agency agreement with the Air Force, in which a jointly funded effort was undertaken to produce two RFP's for Air Force installations at Seymour Johnson AFB in Goldsboro, N.C., and Norton AFB in Ontario, California. The Seymour Johnson RFP has been issued and responses are due in October. The Norton RFP is scheduled for release momentarily and responses are due in November. In addition the Air Force, working through a separate group of consultants, has prepared for release a third RFP on Bergstrom AFB, Austin, Texas, on which contractor responses are also due in November.

The Army issued its first shared energy savings RFP at its Army Depot in Corpus Christi, Texas, in March of this year with contractor proposals due August 14, 1987. RFPs are being prepared by the Army on the Beaumont Medical Center at Fort Bliss, Austin, Texas, and Fort Sam Houston, San Antonio, Texas, for release in November and December respectively.

Among the civilian agencies, the Department of Housing and Urban Development and the U.S. Postal Service are taking the lead. HUD has entered into an Inter-Agency Agreement with the Department of Energy to jointly develop a shared energy savings contract on the HUD Headquarters building in Washington, D.C., for possible bid during the Fall of 1987. The Postal Service is preparing an RFP on one of its general mail facilities in San Diego, California. The expected release date is August 1, 1987.

As I mentioned, other Federal civilian agencies that have been briefed on the advantages of using the shared energy savings concept to accomplish existing building retrofit for energy conservation purposes include NASA, GSA, HHS, Interior, Commerce, and Treasury. The Department of Agriculture is scheduled for a briefing on August 3rd. NASA is well along in its evaluation of the shared energy savings potentials for its facilities and HHS is considering a project at its National Institute of Health site in Bethesda, Maryland.

Lessons Learned to Date

During the course of implementing Federal shared energy savings projects, experience has been gained that can help overcome barriers that can hinder

ready acceptance and adoption of Federal energy conservation shared savings contracts. These barriers include both difficulties in establishing measurable parameters that can be incorporated into the contract to monitor contractor performance as well as current procurement and contractual practices and guidelines that do not anticipate the unique nature of energy performance contracting. In these cases the Federal energy shared savings contracts do not readily and neatly fit with standard procurement regulations. Some examples may provide the Committee with a sense of what is being encountered and how we are attempting to alleviate the situation.

Experience has been gained on the needs of contractors attempting to deal with the Federal government in the proposal process. This early experience demonstrated that potential contractors found proposal preparation unnecessarily difficult. We recognize that in order for shared savings to work, particularly in the early stages, the private sector must be attracted to working with the Federal government, and are working to alleviate this difficulty.

We have also gained understanding from the early projects on the need to provide sufficient technical information to enable submission of a complete bid, the need to have prepared government personnel at pre-bid conferences, and realistic schedules for proposal submittal. Through this experience, agencies are now more aware of conditions that are major deterrents to bidders. In providing assistance to agencies on conducting shared savings projects, FEMP is attempting to avoid any pitfalls before they take place.

The need for simpler solicitation documents and approaches has been pointed out. As successful solicitations are generated, these will be used as

models by other agencies. In the meantime, extra effort must be expended to make the solicitations comprehensible. FEMP, in co-sponsoring the development of two Air Force solicitations, has recognized this need and has made the preparation of simpler RFP's a priority. Additionally, various solicitation approaches are being employed in the pilot projects, from one-step, two-step, to four-step RFPs.

In terms of contract development, lack of standard contracting procedures for energy performance contracting has resulted in numerous delays and acts as a significant disincentive for the private sector to work with the Federal government. In developing shared savings contracts, Federal agencies are dealing with a new contracting and financing technique that does not fit neatly into existing procedures. For example, the task of combining construction of new energy facilities with contractor-provided energy management services in a single agreement has perplexed agency contracting personnel involved in preparing shared savings solicitations. Is it a construction contract, a services contract, or both?

Another unique aspect of shared savings contracting is the importance that contractor financial stability plays. At present, no agency has developed evaluation criteria that adequately address the Government's need to ensure that a contractor can provide the requisite investment capital as well as be able to survive as a viable business over the entire term of the contract.

Specific contractual provisions and clauses, including those regarding "termination for convenience," contract funding that is "subject to availability of funds," as well as cost and pricing data requirements, have been real obstacles. While these provisions serve a purpose for

normal contracting, their impact on execution of Federal energy shared savings contracts is negative, since many of the private sector firms perceive that these provisions place the bulk of the risk on them instead of balancing the risk between the Federal government and the contractor.

The solution to these problems is likely to be incremental and piecemeal until sufficient experience is gained from the early projects to identify appropriate procedures, such as standardized contacting procedures, and possible revisions to Federal Acquisition Regulation guidelines and clauses.

A major barrier has been the development and use of an energy baseline. The baseline identifies pre-retrofit energy use and provides the basis for measuring energy savings resulting from the contractor's work. Many techniques for baseline generation exist, including computerized simulation of the building's energy use and multiple linear regression analysis. Although each method has its proponents and critics, the major difficulty has been in establishing a preferred technique with which the industry and government officials can become knowledgeable and comfortable.

DOE, through FEMP, has sponsored the development of the ASEAM-2 (A Simplified Energy Analysis Method) program, a computerized building simulation technique for generating building energy baselines. This technique was recently utilized to model the energy use in the HUD Headquarters buildings for a proposed shared savings project. It appears that ASEAM-2, like other baselining techniques, is not universally applicable to all building energy use situations; however, through continued use of the program in appropriate federal shared savings projects, it can become a widely accepted tool for Federal agencies in developing energy baselines. FEMP is continuing to offer its ASEAM-2 training

sessions nationwide and software and documentation are now available to Federal and State government personnel at a reasonable cost. FEMP also continues to monitor and provide technical assistance where feasible on developing alternative approaches.

S. 1382

In commenting on S. 1382, I would like to reiterate that we do share the Committee's interest and objectives in making the Federal government more energy efficient. We also commend the Committee's action to delete existing but burdensome mandates requiring extensive Federal buildings retrofit by 1990. Likewise, providing the Secretary with authority to set the discount rate would allow consideration of energy conservation investments to be made in accordance with current conditions and market rates and provide more flexibility than allowed under existing NECPA authorities. The Secretary will follow the discount rate used for other government-wide investments.

While we believe that goals and incentive systems for increasing energy efficiency can be an effective means of guiding agency actions, the Administration is against specific mandatory goals which are not yet supported by a critical analysis. It is our belief that those provisions, if determined feasible, should be established through appropriate administrative mechanisms such as an Executive Order rather than through legislation.

The Federal regulations now in force are sufficient to maintain building temperatures within reasonable limits. The important point to emphasize is not really lower temperatures in winter or higher in summer, but the proper operation and maintenance of efficient heating and cooling systems in federal

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buildings. We need to provide reasonably comfortable working conditions, but we do not have to waste energy to do it. The FEMP program is aimed in large part at achieving such efficient, well-operated systems. Therefore, we do not believe it is appropriate to set statutory government-wide limits on building temperatures.

The "656" Committee is currently studying the issue of whether the retention of some portion of the savings would be an appropriate incentive for Federal managers to undertake more energy conservation measures. We will report back to you the findings of the committee.

We are convinced that shared savings contracting has great potential and we will continue to work hard to ensure its success. I will be glad to answer any questions you may have.

Senator METZENBAUM. Thank you, Ms. Fitzpatrick. We will have some questions, but I think we will hear from all the witnesses first.

Mr. Jones, Jeffrey Jones, Director for Energy Policy, Department of Defense.

STATEMENT OF JEFFREY A. JONES, DIRECTOR, ENERGY POLICY, DEPARTMENT OF DEFENSE

Mr. JONES. Thank you, Mr. Chairman. Can you hear me?

Senator METZENBAUM. I hear you. Thank you. Thank you for asking.

Mr. JONES. It is a pleasure to be here today to discuss the Department's energy programs. I do have a statement which I will ask be submitted for the record, but I will not read the whole thing because most of it——

Senator METZENBAUM. All your statements will be included in the record.

Mr. JONES. DOD is the largest energy user in the Federal Government. We use 82 percent of the government's energy, and that is a big bunch. As you said, we consumed $35 million worth of energy in the State of Ohio last year in facilities. And needless to say, we appreciate the meaning of a 10 percent savings of that $35 million because that would be money spent right there at the installation for other purposes. And we are anxious to achieve those kinds of savings. I can assure you of that.

We are proud of the fact that we have initiated in our office a program to save up to $25 million a year in the purchase of natural gas every year. We are saving at least $40 million to $80 million a year on purchases of coal due to changes that Congress authorized us to make in the way we fuel installations in Germany. So, the Department of Defense has taken actions in the last couple years to save up to $100 million a year in taxpayers' money. And we are proud of that achievement.

Nevertheless, we have plenty of places we can go. We consume a tremendous amount, $2.7 billion in facilities energy per year. That is 40 percent of our energy in dollars and 30 percent of it in Btu's. We manage 400,000 of those 500,000 Federal buildings. And I found out the other day that one of those buildings is 378 years old, believe it or not. It is in Bermuda.

So, we have some challenges. We have got all architectural styles. We have got buildings that date back to the colonial times. We have got buildings that are metered buildings that are buildings that were supposed to last 20 years that have lasted 60. And the challenges are enormous in our Department. And we are very anxious to try to apply the legislation that this committee gave us the authority to use last year.

Between the period of 1975 to 1985, we saved 18.3 percent in gross square foot Btu's consumption in buildings. We came very close to the 20 percent goal. As a matter of fact, the Department of the Army exceeded that goal. And that was quite an accomplishment in the face of mission increases, major substitution of facilities energy and for mobility energy in the case of simulators, which are very high energy consuming pieces of equipment.

Electricity in the Department of Defense went up 13 percent during that 10 years, but nationally it went up 30 percent. So, even there we were trying to temper our energy use, and did so in comparison with the private sector or the Nation as a whole.

During that 10 year period, the cost avoidance in the Department of Defense exceeded $3.8 billion, not a mean feat. And we were proud of that. And it was reported by the Secretary to the President. And he intends to continue those kinds of savings although we are not going to achieve that degree probably. The first 20 percent are always the easiest. The second are going to be a little harder.

We have continuing energy programs in the Department of Defense at this moment. On our own initiative, we published some guidance last year that established energy reduction goals for Fiscal Year 1995. Those goals exists. Those goals are being developed and supported by the military departments within available resources.

When I say within available resources, we all know that our primary mission of defense has to come first, but secondarily, clearly resource management is key because without resource management, our credibility is gone, our money is gone, and we can't do a primary mission.

Senator METZENBAUM. Mr. Jones, I'll get around to my questions later to all of you, but I would like to know. It always has perplexed me. We'll give you the extra time. It has always perplexed me that as often as I fly an airplane, I have never seen an officer of the military fly commercial. I have never seen a major, a captain, an admiral, a general, which means to me that they are always flying on jets with unbelievable usage of fuel for trips that I am certain are not all of an emergency nature. And I have often wondered how much fuel would we save and how fast would you lose your job if you raised this issue. [Laughter.]

Mr. JONES. That is not a new question, as you know. Well, I'll tell you this, that most of the time those guys—the higher ranks—don't fly in uniform for security reasons. I came back from Brussels, oh, about two months ago with the Deputy Director of the—Logistics Director of the Joint Chiefs of Staff, and he was not in uniform. So, you would not have known. And that was on a Pan Am flight.

You have some military flights. And of course, Congressmen take Air Force flights too.

Senator METZENBAUM. I don't.

Mr. JONES. Well, you are an exception, Mr. Chairman.

Senator METZENBAUM. Why don't you put your foot down?

Mr. JONES. Pardon?

Senator METZENBAUM. Why don't you put your foot down, and say unless there is some extraordinary reason or there is absolutely a "has-to-be." We don't have to send people to the air show in Paris. We don't have to send them on trips around the world. The Department of Defense could say no.

Mr. JONES. I will pass that on the General Skance, sir.

In all due respect though, I think 90 percent of military travel—95 percent, even in wartime, is going to be by commercial air.

Senator METZENBAUM. In wartime.

Mr. JONES. Even in wartime because the military air fleets are dedicated to lifting equipment and not personnel. Most personnel go by charter air carrier. And that is the way it is today. Even on a mobilization exercise, they charter the commercial aircraft and move the troops with those.

Senator METZENBAUM. I interrupted you. Take another minute to finish up.

Mr. JONES. Well, that is not my area of expertise. So, I'll go on to a couple of other things.

As I said, we do have standards. We do have goals out there. They are difficult to enforce because, in fact, economics have to play. But we have continuing investment programs. We do have money in the programs in at least two of the services for facility retrofits, and we expect that those will continue for some period of time.

A couple of comments on the piece of legislation itself, without commenting specifically on the goals because I think there will be questions about that later, and I think Donna has already spoken to that. But I would say that I'm very pleased to see the concept of incentivizing in section 548. This is consistent with things that are going on outside of this particular piece of legislation. I think there is kind of a groundswell view that incentives work sometimes better than hammers. And several programs in the Department of Defense are already using this type of concept, and we think some of them are being successful at using it. So, we are pleased to see that.

We can comment on other portions of the bill later. Section 549 dealing with the task force certainly seems to be probably unnecessary as far as the specific detail, but that is another issue we can talk about.

As far as shared energy savings contracting, we are just about to let our first contract. That contract we expect will be out sometime between now and September we hope at least—the Great Lakes contracts.

We have an update that will be coming out in the Federal Energy Management Program summary report all of the shared energy savings projects. We have as many as 10 that will be out in solicitation by the end of the year.

Thank you.

[The prepared statement of Mr. Jones follows:]

STATEMENT OF

JEFFREY A. JONES

DIRECTOR, ENERGY POLICY

OFFICE OF THE SECRETARY OF DEFENSE

BEFORE THE

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

UNITED STATES SENATE

FIRST SESSION 100 TH CONGRESS

THURSDAY JULY 30, 1987

HOLD UNTIL RELEASED

BY THE COMMITTEE

S. 1382 FEDERAL ENERGY MANAGEMENT IMPROVEMENT ACT

Mr. Chairman and Members of the Committee:

INTRODUCTION:

I am very pleased to be asked to appear before you today to discuss the Department's energy programs and your Committee's proposed bill to amend the National Energy Conservation and Policy Act to improve the federal energy management program. We share the Committee's interest in improving energy use efficiency and have been working closely with the Department of Energy, and the other agencies through the "656" Committee to coordinate our efforts and share lessons learned. We believe that there still are additional cost effective energy conservation opportunities available in the Federal sector. For example, Mr. Chairman, the Defense facilities energy bill in Ohio last year was over $34 million. An additional 10% reduction could satisfy much needed mission support for those bases with no increase in the budget. We look forward to working with Congress to realize those potential savings.

The Department of Defense is the single largest energy using organization; 82% of the Federal government use, or approximately 2 percent of the national usage. The cost of facilities mission support alone, 30 percent of our total use, was approximately $2.7 billion last year. We take very seriously our obligation to carefully manage the use of those resources.

ACHIEVEMENTS

As you know, Defense buildings and facilities range from truly historical to the very latest in high technology. We manage approximately 400,000 buildings, in every climate zone and with every architectural feature, and construction technique and product used over the last 300 years. The one thing that all these facilities have in common is that their primary purpose is to support the mission of the Services and the Defense personnel using them. National Defense is our most important product and buildings and facilities management sometimes must take a secondary role to the mission and the support of the personnel performing that mission.

The individual Service facilities managers and tenant personnel have however taken the national energy conservation program very seriously. During Fiscal Year 1985 the Department achieved an 18.3% reduction in total facilities energy use per square foot compared with FY 1975. This reduction was achieved in spite of dramatically increased energy demands of the all volunteer force, the requirements of increased operational tempo and major substitution of facilities energy for more intensive mobility energy through the increased use of high technology equipment such as weapons platform simulators.

In spite of these technological demands for increased electrical energy, DoD's electricity use increased only 13%

compared with the national increase of 30% in the same period. Parenthetically if the industry accepted "site" conversion rate of electrical energy is used rather than the "source" rate specified in the Federal Energy Management Program reporting system, DoD's conservation reached 27.4% from FY 1975 to FY 1985. During this period, DoD facilities petroleum use decreased 41% and our energy cost avoidance during the ten year period covered by Executive Order 12003 was in excess of $3.8 billion.

CONTINUING EFFORTS

Because energy is a critical component of Defense mission support as well as an expensive resource, the Services have continued to emphasize efficiency improvement and conservation. Our program includes continued emphasis on proven techniques of improved operation and maintenance, efficient building design, application of renewable energy and emerging technologies where cost effective and existing facilities retrofits with rapid payback. Recognizing the need for quantifiable program measurement tools we have implemented a set of energy resource management goals for the next ten year period; Fiscal Year 1985 to 1995.

These goals were developed as a guide for the Services in their continuing efforts to improve energy use efficiency while recognizing their previous accomplishments and their individual mission needs and personnel requirements. We have tried to incorporate the lessons we learned over the past ten years into

these new guidelines and we are continuing to modify them as the situation changes to ensure that the basic organization goals and objectives are supported rather than restricted by our efforts.

SHARED ENERGY SAVINGS CONTRACTS

I would like to expand a little on our experience with shared energy savings contracting to date. As you may be aware, the Department strongly supported the passage of shared energy savings contracting legislation last year. We had instituted a tri-Service steering group in 1985 to identify the most expeditious method to take advantage of the contracting concept which was attracting so much interest in the public sector. After over a year of developmental effort, the Services determined that there simply was no existing Federal contracting mechanism available to secure the benefits of private energy service companies. Once the legislation was in place which would allow the contracts, we tasked the Services with accomplishment of pilot contracts to identify the highest payback types of opportunities and to develop the best contract documents and mechanisms applicable under our existing procurement regulations.

So, a year after the passage of the legislation we still have no contracts. Why?

Shared energy savings contracts don't fit any of the traditional procurement models with which we are comfortable. By their very nature they are undefined, for after all what we are

really buying is the expertise of the energy saving company and each "bidder" may be an expert in different techniques. In the private sector such contracts are consumated through a very flexible process of informal negotiation with the private sector contracting officer capable of choosing the company which he or she feels most comfortable with. In the Federal procurement process each decision must be defendable to all those not chosen, and there is an elaborate formal protest procedure available to also-rans who think they were discriminated against for any reason. Federal procurement officers are very concerned with putting contract solicitation and award packages out that are complete, fair and executable. They try to anticipate all possible problems and how they will be dealt with, if not resolved, in every eventuality.

TECHNICAL ISSUES

The development of viable contract documents and procedures for shared energy contracting has taken real effort. The tri-Services Steering Group, chaired by the Navy, and assisted by the Department of Energy has addressed dozens of very real procurement issues. Their goal has been to identify the easiest procurement process within existing guidance which would lead to the greatest savings while allowing maximum contractor flexibility and competition. Some of the thornier issues which they are addressing include:

o Should Davis-Bacon wage rate determination requirements be included in the solicitation?,

o Should the contractor be required to furnish insurance to guarantee savings?,

o How can the "termination for convenience" clause be structured to reduce contractor fears and uncertainties?,

o How can transfer of title of equipment can be addressed in a manner which satisfies the anti-deficiency act while assuring the contractor of fair treatment,

o Other issues which have been addressed and are being resolved include: baseline energy use determination, detail of proposal audit required, inspection detail, inclusion of demand savings, maintenance responsibility, cost and pricing data requirement, identification of unacceptable retrofit options, "Buy America" and "Service Contract" Acts applicability, differing contract term evaluation criteria and contract provisions for the sharing of savings in excess of those originally proposed.

These and other issues have been identified and are being resolved through the development and issuance of pilot contracts and with the input of many energy service company representatives. In many cases the resolution of specific issues must be finally through specific application to each unique contract situation and by the individual contracting officer who is ultimately responsible for putting his or her signature on the bottom line.

SUMMARY

I don't want to give the impression that these are insurmountable problems. We anticipate the signing of our first pilot contracts some time this fall with the pace accellerating as the contracting community becomes more comfortable with this new way of doing business. But I do want to convey the reality that energy conservation, as a management improvement initiative, requires attention. We have made significant progress and the savings to be realized in the future will be more difficult. But they are there and we intend to work toward them.

Again I would like to express my gratitude for being asked to appear before you and I would be happy to answer any questions that you may have.

Senator METZENBAUM. Thank you very much, Mr. Jones.

It's my understanding that Nancy Chisholm is with us, but does not intend to make a statement, but is available for questions. I am happy to have you with us.

Mr. John T. Myers, Deputy Assistant Commissioner for Real Property Management and Safety, Public Buildings Service of the GSA. Happy to have you here, Mr. Myers.

STATEMENT OF JOHN T. MYERS, DEPUTY ASSISTANT COMMISSIONER, REAL PROPERTY MANAGEMENT AND SAFETY, PUBLIC BUILDINGS SERVICE, GENERAL SERVICES ADMINISTRATION, ACCOMPANIED BY PATRICIA A. SZERVO, ASSOCIATE ADMINISTRATOR, ACQUISITION POLICY

Mr. MYERS. Thank you, Mr. Chairman. It is a pleasure to be here to present GSA's energy program and our views on the bill, 1382.

GSA has had an aggressive energy conservation program since the early 1970s, which resulted in approximately 40 percent energy reduction. Of course, our program started long before the formal energy reporting in 1975, so we did not get some of the credit we thought we might have.

We are continuing with an overall zero growth program in all our buildings, but are looking at energy conservation within the context of worker productivity and total facility cost to the government. We are improving spatialization in existing buildings and utilizing vacant space whenever possible. These efforts have resulted in increased energy consumption, but the savings effected in the space program greatly outweigh the increased costs in energy. We do not recommend the proposed reinstatement of the old temperature regulations because they adversely affected worker productivity. Many of our buildings are between 35 to 40 years old with building systems that cannot control building temperatures precisely that result in numerous hot and cold areas. We believe that significant future energy savings will be the result of retrofitting and modernizing building systems and controls. We have begun this modernization in our identification and budgeting of energy improvement projects.

Opportunities resulting from share energy savings contracts would contribute to these improvements. With limited contracting resources, we plan to utilize the model of shared energy contracts developed by the lead agencies of the Department of Defense and VA. Since the lead agencies have had difficulty awarding contracts, we have not awarded a contract to date, but we have selected a number of buildings which we feel would be potential candidates for this type of contract.

This concludes my formal remarks, and I would be happy to answer any questions.

[The prepared statement of Mr. Myers follows:]

STATEMENT OF JOHN T. MYERS

DEPUTY ASSISTANT COMMISSIONER

REAL PROPERTY MANAGEMENT AND SAFETY

GENERAL SERVICES ADMINISTRATION, PUBLIC BUILDINGS SERVICE

BEFORE THE

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

JULY 30, 1987

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE, I AM JOHN T. MYERS, DEPUTY ASSISTANT COMMISSIONER, REAL PROPERTY MANAGEMENT AND SAFETY, PUBLIC BUILDINGS SERVICE, GENERAL SERVICES ADMINISTRATION. ACCOMPANYING ME ARE MS. PATRICIA A. SZERVO, ASSOCIATE ADMINISTRATOR FOR ACQUISITION POLICY, MR. SEAN ALLAN, FLEET MANAGEMENT DIVISION DIRECTOR, FEDERAL SUPPLY SERVICE AND MR. JOHN F. IACONIS, ENERGY COORDINATOR, PUBLIC BUILDINGS SERVICE.

I AM PLEASED TO HAVE THIS OPPORTUNITY TO APPEAR BEFORE YOU TO DISCUSS THE VIEWS OF THE GENERAL SERVICES ADMINISTRATION (GSA) ON SENATE BILL S. 1382 - "FEDERAL ENERGY MANAGEMENT IMPROVEMENT ACT".

AT THIS TIME, I WOULD LIKE TO PROVIDE YOU A BRIEF OVERVIEW OF THE NUMBERS AND KINDS OF BUILDINGS THAT GSA MANAGES AS WELL AS A BRIEF BACKGROUND ON OUR ENERGY USAGE. THIS AGENCY IS RESPONSIBLE FOR MANAGING APPROXIMATELY 6800 BUILDINGS. OF THIS OVERALL TOTAL, ABOUT TWO-THIRDS ARE LEASED BUILDINGS WHICH ARE PRIVATELY OWNED AND THE REMAINDER OR ABOUT 2200 BUILDINGS ARE

GOVERNMENT-OWNED AND MANAGED BY GSA. THE MAJORITY OF THE BUILDINGS ARE SITED IN URBAN AREAS AND ARE LOCATED TO SUPPORT THE MISSION OF THE VARIOUS FEDERAL GOVERNMENT AGENCIES AND TO PROVIDE CONVENIENT ACCESS TO THE PUBLIC. THE TYPE OF BUILDINGS THAT GSA OPERATES IS PREDOMINATELY OFFICE BUILDINGS; OTHER BUILDING TYPES WE OPERATE INCLUDE WAREHOUSES, BORDER STATIONS, AND COURTHOUSES.

GSA USES ABOUT 3.4 PERCENT OF THE TOTAL ENERGY USED BY ALL FEDERAL AGENCIES IN FEDERALLY OWNED BUILDINGS AND FACILITIES. GSA HAS HAD AN ONGOING ENERGY MANAGEMENT PROGRAM SINCE THE EARLY 1970'S WHEN IMPORTED PETROLEUM OIL BECAME A CONCERN. DURING THE LAST FORMAL ENERGY REDUCTION GOAL OF 20 PERCENT FOR EXISTING BUILDINGS ESTABLISHED BY EXECUTIVE ORDER 12003, GSA ACHIEVED A REDUCTION OF 24.5 PERCENT FOR FISCAL YEAR 1985 AS COMPARED TO FISCAL YEAR 1975. GSA HAD THE LOWEST AVERAGE ANNUAL ENERGY CONSUMPTION PER GROSS SQUARE FEET OF ALL FEDERAL AGENCIES. GSA SUPPORTS ENERGY CONSERVATION AND HAS IMPLEMENTED NUMEROUS ACTIONS TO REDUCE ENERGY IN GENERAL AND TO OPERATE MORE EFFICIENTLY. THIS CONCLUDES THE OVERVIEW AND BACKGROUND PORTION OF MY STATEMENT.

I WOULD NOW LIKE TO ADDRESS THREE ISSUES CONCERNING SENATE BILL S. 1382. THESE ISSUES ARE THE PROPOSED ENERGY REDUCTION GOAL OF 10 PERCENT, THE REINSTATEMENT OF THE BUILDING TEMPERATURE LEVELS IN EFFECT ON JULY 1, 1986, AND THE PROPOSED ENERGY PERFORMANCE GOAL FOR PASSENGER AUTOMOBILES.

GSA SUPPORTS ENERGY REDUCTION GOALS; HOWEVER, WE BELIEVE THAT THEY SHOULD NOT BE SET BY LEGISLATION AND EACH AGENCY SHOULD HAVE THE OPTION TO SET ITS OWN GOAL IN LIEU OF A MANDATED

10 PERCENT. BECAUSE OF SIGNIFICANT ENERGY REDUCTIONS IN THE PAST, APPROXIMATELY 40 PERCENT SINCE THE EARLY 1970'S, AS WELL AS HAVING A LOW AVERAGE ENERGY CONSUMPTION RATE, WE FEEL THAT FURTHER SIGNIFICANT REDUCTION MAY ADVERSELY IMPACT THE PERFORMANCE OF OUR CLIENT AGENCIES. SEVERAL FACTORS WILL INCREASE OUR ENERGY CONSUMPTION.

THESE FACTORS ARE OUR INITIATIVES TO REDUCE THE SQUARE FOOTAGE PER PERSON AND TO CONVERT UNDERUTILIZED SPACE TO PRODUCTIVE USE WHERE POSSIBLE. IN ADDITION, MANY AGENCIES ARE INSTALLING OFFICE AUTOMATION EQUIPMENT; THIS IMPACTS NOT ONLY ON DIRECT ELECTRICAL CONSUMPTION, BUT ALSO UPON COOLING ENERGY REQUIREMENTS. THESE THREE FACTORS INCREASE AVERAGE ENERGY USAGE IN GENERAL. THE SAVINGS EFFECTED IN THE SPACE PROGRAMS WILL GREATLY OUTWEIGH ANY AVERAGE COST INCREASE IN ENERGY. THIS IS WHY WE SUGGEST EACH AGENCY SHOULD HAVE THE OPTION OF AN INDIVIDUAL GOAL; THE GOAL WOULD BE FORMALLY ESTABLISHED AND TRACKED. ENERGY CONSUMPTION DATA WILL BE SENT TO THE DEPARTMENT OF ENERGY FOR THEIR INFORMATION AND REPORTING REQUIREMENTS.

THE SECOND CONCERN IS THE PROPOSED REINSTATEMENT OF THE OLD TEMPERATURE REGULATIONS. THE NEW TEMPERATURES WHICH ARE PART OF THE GENERAL REGULATIONS OF BUILDINGS AND GROUNDS JUST WENT INTO EFFECT ON APRIL 8, 1987. THE HEATING AND COOLING RANGES WERE EACH EXPANDED BY 2 DEGREES FAHRENHEIT. THE HEATING RANGE IS NOW 65-70 DEGREES FAHRENHEIT (IT WAS 65-68) AND THE COOLING RANGE IS NOW 76-80 DEGREES FAHRENHEIT (IT WAS 78-80). THIS IS STILL LESS THAN PRIVATE SECTOR STANDARDS.

THE GENERAL OBJECTIVE OF THE TEMPERATURE CHANGE IS TO IMPROVE THE WORK ENVIRONMENT. THE PURPOSE OF THE CHANGE WAS TO BETTER ALIGN POLICY WITH PRACTICE AND TO ALLOW OPERATIONAL FLEXIBILITY BY THE PEOPLE MANAGING THE BUILDINGS TO IMPROVE THE QUALITY OF THE WORK ENVIRONMENT. THE MAJORITY OF OUR BUILDINGS ARE BETWEEN 35-40 YEARS OLD. THESE BUILDINGS WERE DESIGNED IN AN ERA OF ENERGY ABUNDANCE. TEMPERATURES CANNOT BE CONTROLLED CONCISELY IN A BUILDING. THUS, IT IS NOT UNUSUAL TO HAVE HOT AND COLD SPOTS THROUGHOUT MANY OF OUR BUILDINGS. OVER THE YEARS, ONE OF THE PRIMARY COMPLAINTS OF FEDERAL EMPLOYEES IS ABOUT TEMPERATURES. ONE OF GSA'S OBJECTIVES IS TO IMPROVE THE WORK ENVIRONMENT OF THE FEDERAL EMPLOYEE. THIS WAS ACCOMPLISHED BY ALLOWING FOR THE ADJUSTMENT OF TEMPERATURES WHERE NECESSARY.

WE HAVE BUDGETED NO ADDITIONAL FUNDS FOR THIS INCREASE. OTHER AGENCIES DO NOT HAVE TO INCREASE THEIR EXPENSES. WHILE THE COST OF ENERGY USED IN BUILDINGS IS SIGNIFICANT, IT IS RELATIVELY MINOR IN COMPARISON TO THE COST OF PEOPLE AND PROGRAMS THAT THEY DIRECT. WE BELIEVE THAT THE OVERALL CONCERN OF THE FEDERAL GOVERNMENT SHOULD BE CONTROL OF ENERGY USE IN ITS BUILDINGS. TEMPERATURE RESTRICTIONS ARE ONLY ONE OF THE WAYS THAT THIS CONCERN MAY BE ADDRESSED, BUT THEY SHOULD BE KEPT FLEXIBLE AND NOT SET IN LEGISLATION.

THE THIRD CONCERN IS THE PROPOSED ENERGY PERFORMANCE GOAL FOR FEDERAL PASSENGER AUTOMOBILES. WE BELIEVE THAT IT IS INAPPROPRIATE TO MANDATE A 10 PERCENT REDUCTION GOAL IN LIGHT OF THE FACT THAT WE HAVE NO KNOWLEDGE OF THE COST OR TYPE OF VEHICLE THAT THE MARKETPLACE WILL OFFER IN THE FUTURE. WE BELIEVE THAT ALL GOALS SHOULD BE BACKED UP BY APPROPRIATE ANALYSIS.

FINALLY, YOU ALSO ASKED FOR COMMENTS ON THE IMPLEMENTATION OF THE NEW AUTHORITY PROVIDED BY TITLE VIII OF THE NATIONAL ENERGY CONSERVATION POLICY ACT TO ENTER INTO LONG-TERM (NOT TO EXCEED 25 YEARS) "SHARED SAVINGS" CONTRACTS FOR THE PURPOSE OF REDUCING THE COST OF ENERGY CONSUMED IN FEDERAL FACILITIES. CONTRACTS AWARDED UNDER THE NEW AUTHORITY MUST PROVIDE THAT THE CONTRACTOR INCUR COSTS OF IMPLEMENTING ENERGY SAVINGS MEASURES IN EXCHANGE FOR A SHARE OF ANY SAVINGS DIRECTLY RESULTING FROM IMPLEMENTATION OF THE ENERGY SAVINGS MEASURES DURING THE TERM OF THE CONTRACT. GSA HAS BEEN MONITORING THE PROGRESS OF THE LEAD AGENCIES, DOD AND VA, IN USING THE NEW AUTHORITY AND PLANS TO CONSIDER THE EXPERIENCE OF THE LEAD AGENCIES IN REVIEWING ENERGY PROJECTS FOR POTENTIAL USE OF THE AUTHORITY. SINCE THE LEAD AGENCIES HAVE HAD DIFFICULTY AWARDING CONTRACTS, THERE IS VERY LIMITED EXPERIENCE TO DATE ON THE BENEFITS OR PROBLEMS WITH USE OF THE NEW AUTHORITY. THEREFORE, WE FEEL THAT THIS LEGISLATION IS NOT NEEDED AT THIS TIME. WE WILL CONTINUE, HOWEVER, TO MONITOR AND EVALUATE ONGOING ENERGY CONSERVATION PROJECTS SO AS TO DEVELOP AN ADEQUATE DATABASE TO HELP IN THE DESIGN AND EVALUATION OF COST-EFFECTIVE CONSERVATION PROJECTS IN THE FUTURE.

THIS CONCLUDES MY PREPARED STATEMENT. THANK YOU FOR PROVIDING THE OPPORTUNITY TO PRESENT OUR VIEWS. I WILL BE GLAD TO ANSWER ANY QUESTIONS YOU MAY HAVE.

Senator METZENBAUM. Thank you very much.

I have a few questions that I will ask. I'll start off with you, Ms. Fitzpatrick, the Department of Energy.

You state in your testimony that although you believe goals can be an effective means of guiding agency actions, the administration is against specific, mandatory goals which are not yet supported by critical analysis. It has been two years since the previous goals expired. Has the Department initiated a critical analysis for new goals? And when do you expect the findings of these analyses to be available?

Ms. FITZPATRICK. Mr. Chairman, we do not have an overall Federal Government analysis, but we are working with virtually all of the agencies, especially the Department of Defense since it is the biggest user, to analyze their building energy use and to pick out the projects, and in particular the generic type projects, that could be applied throughout the agencies. We have analyzed energy savings potential on a number of those projects. And it is evident that in many, many cases there are substantial savings to be gained. It varies, of course, by the type of building and on the type of agency, its activities, what the agency is going to be called upon to do in the future.

And what we would prefer to do is address the issues on an agency-by-agency basis and be aggressive and urge the agencies with the tools that we can provide them and with the legal authorities they already have to do as much as possible. But it is very difficult to set a standard for the entire government because the standards——

Senator METZENBAUM. Do you have internal targets?

Ms. FITZPATRICK. I believe the Department of Defense has internal targets—has issued its own targets. The Department of Energy has prepared for its own internal use agency targets for the Department of Energy.

The problem is that if we do something—if we issue a government-wide target which is reasonable for all agencies to meet, that target will of necessity be a kind of a least common denominator. And targets can become ceilings too. What you establish as a floor becomes a ceiling where people then become satisfied. Well, I'm at the target, they could have gone on—some agencies could do more, but it is hard to give them the incentive to do more.

Senator METZENBAUM. It is two years. Nothing has happened. It has been talk, talk so far since the goals expired. How much longer till there will be some actual targets in place?

Ms. FITZPATRICK. Well, as I say, the Department of Defense, which is the biggest energy user, more than 80 percent, has issued its targets for its agency. So, there is a target in place for 80 percent of the Federal energy use.

Senator METZENBAUM. Do you believe that the discretionary energy-efficient targets and the incentive program as proposed in S. 1382 would enhance the Federal Government's ability to save taxpayer dollars through increased energy efficiency?

Ms. FITZPATRICK. I think generally that incentives can be a very useful tool in encouraging agency action. As I said, the situation varies from agency to agency, and apparently there are still some issues regarding procurement procedures and the legalities of how

many can be handled within an agency that need to be ironed out. But our general view is that incentives are probably a good idea and certainly deserve our study.

Senator METZENBAUM. Could you obtain for us a legal analysis—your own people—as to whether the establishment of such goals without legislation would be legal?

Ms. FITZPATRICK. Yes, sir.

Senator METZENBAUM. We would appreciate it.

Ms. FITZPATRICK. Yes. And the incentives issue also?

Senator METZENBAUM. Pardon?

Ms. FITZPATRICK. Whether incentives also would be legal——

Senator METZENBAUM. Yes.

Ms. FITZPATRICK [continuing]. And allowing agencies to keep savings?

Senator METZENBAUM. Yes.

Ms. FITZPATRICK. Yes.

Senator METZENBAUM. One apparent difficulty in implementing shared savings is the lack of clear administrative leadership. For example, does OMB encourage agencies to use this new authority? Or has DOE initiated a pilot project to demonstrate its leadership by way of example?

Ms. FITZPATRICK. Yes, sir. We have worked with OMB for more than two years on, first of all, what kind of shared savings authority would be needed. As you know, we supported the shared savings legislation that was passed last year. And OMB has encouraged us, and we have worked very hard to familiarize the agencies with what is in that legislation and how they can implement it. And we have offered them our—and they have availed themselves of our technical assistance in using the legislation.

There are a number of projects that are in process. The Department of Defense has just reported that they are about to issue an RFP on a major project at the Great Lakes Naval Training Station. There are about 12 other projects that are in various stages of preparation in the agencies. In addition to that, the Department of Energy has about 10 or 11 projects that are in various stages of study and preparation for funding and issuance of an RFP.

Senator METZENBAUM. I want to say the Chair has a number of other questions of each of the witnesses. I assume that if we send you a communications letter that you will be happy to respond in writing. And then we will include it in the record. Would that be satisfactory?

Ms. FITZPATRICK. Yes.

Senator METZENBAUM. Mr. Jones, in your view is the Department currently authorized to allow agencies to retain a portion of the savings resulting from its energy efficiency efforts?

Mr. JONES. Mr. Chairman, I cannot give you a legal answer, but I would have to say the Department feels it has that authority since it has issued a directive. But specifically on energy savings, we have had programs in the Department for several years within the services and various different elements of the military departments in which some discretionary use of savings that are generated has been permitted—the Army within the Training and Doctrine Command, TRADOC. Also within USROR in Europe, the Army has a $2 million awards program. And some of the savings for energy

savings goes into the funding of that program. The Navy has also some programs.

So, we have done it basically at two or three levels. Before the directive that you are familiar with that was issued last September by the Deputy Secretary, these programs had already been in place. They are not totally across the board.

Senator METZENBAUM. Let me go back to you for a moment, Ms. Fitzpatrick. Was the DOE Conservation Office consulted on the administrative rollbacks of the Federal automobile and building thermostat efficiency standards? And if so, what were your recommendations?

Ms. FITZPATRICK. Mr. Chairman, on the rollback of efficiency standards for automobiles, which I think occurred in 1982, we have looked in our records to see whether we made any comment on that and have not been able to find any record of it. A lot of the people who were in positions then are not there now at the Department. And so, there does not appear to be any clear record of what recommendation was made on the efficiency standards for automobiles.

On the building thermostat settings, which occurred I think last year, the Department did comment on those. And our recommendation was that the settings be maintained as they were.

Senator METZENBAUM. At what?

Ms. FITZPATRICK. We recommended that the settings not be changed.

Senator METZENBAUM. You said the settings should not be changed.

Ms. FITZPATRICK. That is right.

Senator METZENBAUM. Now that the settings have been changed, how much will those policy rollbacks cost the U.S. taxpayers?

Ms. FITZPATRICK. Well, that was one of the questions we had. And we thought there ought to be a good study of that. It is very difficult, as has already been mentioned by another witness, actually to maintain the settings in many of these large and rather old buildings within a two degree—one or two or even three degree range.

For one thing, I can tell you from personal experience the headquarters building of the Department of Energy is very often extremely hot on the south side and at the same time cold on the north side. And you can feel it just walking down the hall. And it is very, very difficult to declare that the temperature in this building will be 76 degrees or anything else and control it within any reason.

I think the important point keep in mind when we are dealing with building temperatures in very large and sometimes old buildings is not to have a target for where the thermostat should be set, but to try to provide comfortable temperatures without wasting energy. And we can do that by retrofitting systems and improving our operations and maintenance procedures. We know we can do that. And that is what we would like to do.

Senator METZENBAUM. What I am asking you is how much money was involved because the government changed the policy?

Ms. FITZPATRICK. I don't know. I'm not sure you could even measure it.

Senator METZENBAUM. Would you be good enough to have your people make a calculation?

Ms. FITZPATRICK. We will try, Mr. Chairman, but——

Senator METZENBAUM. We are told it is about $100 million involved.

Ms. FITZPATRICK. Yes. We will try, but I am not sure that you can come up with something that could stand scrutiny. But we will try, yes.

Senator METZENBAUM. Ms. Chisholm, how much Federal funding is used each year to subsidized utility costs in local and public housing authorities?

Ms. CHISHOLM. Housing authorities mingle our subsidy funds with their own income from rent. The housing authorities pay about $1 billion a year in utility costs.

Senator METZENBAUM. About a billion?

Ms. CHISHOLM. Yes, $1,021,000,000 in 1986.

Senator METZENBAUM. Is that just for energy?

Ms. CHISHOLM. That's right.

Senator NICKLES. Excuse me, Mr. Chairman. Is that by the Federal Government, or is that total housing authority altogether?

Ms. CHISHOLM. That is total, all the housing authorities together.

Senator NICKLES. How much would be the Federal Government's?

Ms. CHISHOLM. Well, we subsidize about half the operating costs of housing authorities.

Senator METZENBAUM. I understand that HUD was consulted on at least two pilot private financing projects by local housing authorities to reduce their utility costs. Could you tell us about these projects? And does HUD have plans to encourage such projects?

Ms. CHISHOLM. Yes. There are two different types of waivers to the present policy that we have given. First of all, in the case of Brockton, Massachusetts, what we did was we froze the current way of calculating how much energy the housing authority was using in a particular project, and allowed them to keep all the savings from retrofit that they did through investment from a nonprofit agency.

The other mode that we have followed with the Tennessee Valley Authority, which has affected about 15 different housing authorities, is that they have borrowed money from TVA, and then we have given them directly the money to pay TVA back over a period of years.

We are open to continuing that kind of waiver for other housing authorities.

Senator METZENBAUM. Thank you, Ms. Chisholm.

Mr. Myers, would you describe briefly for us the process of amending the Federal acquisition regulation and the time needed to make such amendments?

Mr. MYERS. I am not an expert in acquisition regulations, but I have with me——

Ms. Pat Szervo, who is the Associate Administrator for Acquisition Policy. If you would like, I think she can answer your question.

Senator METZENBAUM. Sure. I would be happy to have her do so.

Ms. SZERVO. As you are aware, the Federal acquisition regulations are issued under the authority of DOD, GSA and NASA. If a need is identified for a change in either policy or the regulation itself, then that need would be sent to either the Civilian Agency Acquisition Council or the Defense Acquisition Regulation Council. They would consider it as a case, and if it were deemed to be a change that was required in either policy or regulation and could be made in the regulations, then it would be made.

The process can take anywhere from six weeks to up to a year depending upon the complexity of what is required, the priorities and the workload of the particular committees.

Senator METZENBAUM. Thank you.

Senator Nickles, I understood you have some questions. We are very happy to have you with us this morning.

Senator NICKLES. Thank you, Mr. Chairman. I just have a couple quick questions, and I, like other members of committee, have other obligations this morning as well.

I guess I would ask this question to Ms. Fitzpatrick. I'm not sure if other panelists would be able to more appropriately answer it. They may.

Have we had over the last 10 years something like a 20 percent reduction in the energy cost to the Federal Government for Federal buildings?

Ms. FITZPATRICK. I would have to get you the figures in the reduction in energy costs, Senator. We have had a 16.6 percent decrease in energy use per gross square foot, which was the terms on which the standard was issued.

Senator NICKLES. Well, you answered it correctly. I should not have said energy cost. I should have said energy use.

The legislation as proposed by my friend and colleague, Senator Metzenbaum, would require what? A 10 percent reduction over the next 10 years?

Ms. FITZPATRICK. I believe so.

Senator NICKLES. Do you think that that would be achieved regardless of whether or not we would have the legislation, or would the legislation be necessary for it to be achieved?

Ms. FITZPATRICK. I think that some agencies could certainly do that.

Senator NICKLES. Would do it?

Ms. FITZPATRICK. I think some agencies would. I think some agencies might do more than that. And I think that the goals probably should be set on an agency-by-agency basis in order to establish—when we establish for each agency what its reasonable, maximum goal would be. I think that if you tried to set a standard which is achievable government-wide, what you end up with is a kind of a least common denominator. And some agencies that could do better than the standard lose the incentive to do it because they rest satisfied with only the standard.

Senator NICKLES. Well, I think the goal is laudable.

Ms. FITZPATRICK. Oh, yes, absolutely.

Senator NICKLES. I somewhat question whether or not it is necessary that it be statutory. I would hope that our various administrators and administrations would be trying to make economical energy savings where it is feasible to do so.

Ms. FITZPATRICK. I agree that the goal is laudatory. I think that it is probably generally achievable. But I do not think that legislation is necessary and if it is established for the entire government, it could even be a bit of a disincentive for some people who could do even better than the goal.

Senator NICKLES. I have not examined my colleague's legislation very closely, but do you think if we had legislation that we should always have some type of economic test to make sure of financially prudent investments? I am just thinking of my both business background and residential experience. I am sure that we could have 10 percent reductions, possibly substantially more, but it may or may not be economically feasible to do so.

Senator METZENBAUM. I am going to say my bill does make provisions for that concern.

Ms. FITZPATRICK. Yes. And I would agree economic tests are necessary. Otherwise, we frustrate the Chairman's purpose since one of his major purposes is to save money. If you spend more money than you save, you have not accomplished very much.

Senator NICKLES. I would agree with that. I think economic tests and energy savings are important, as well as conservation and other areas, although I have serious reservations about a legislative mandate. How much of an encouragement either Congress and/or the administration can give the various agencies to accomplish economically feasible energy savings would remain to be seen. I would hope that that would happen. I would think the prudent management concept would encourage that, but my real question is whether it is necessary for more action to be taken.

Do you think it is necessary for a legislative effort to require or mandate a 10 percent reduction or any other reduction? I don't know if there is anything sacrosanct about 10 percent. Or, do you think that there would be enough motivation by the agencies and the administration to enact economical reductions without a legislative mandate?

Ms. FITZPATRICK. Mr. Nickles, since the shared savings legislation was passed, Secretary Herrington has personally contacted all agency heads to inform them of it and to offer DOE's assistance. And I have with my staff done a kind of a traveling road show and visited every agency at the high levels, at the directors of administration, the people who are really responsible, and the response has been uniformly enthusiastic. They are very happy to know that they have this authority. They are very happy to have the assistance that we can offer them in understanding the procurement procedures they will have to go through.

We have two lead agencies, the Department of Defense and the Department of Housing Urban Development, who are actively pursuing projects and are issuing RFPs on it. All the other agencies that we have contacted are in the process of developing their projects, training their people on how to do energy audits, what considerations there have to be. Their procurement and legal people have to be brought up to speed.

But the response has been this is something that we should do. It's the right thing for the country. It's, as you say, the prudent management course that we must take. And I think that they do not need another legislative standard to meet. They need more

help, and we need to get a few projects off the ground and successful so that we will have some models for them to follow.

Senator NICKLES. Thank you very much.

Mr. Chairman, thank you.

Senator METZENBAUM. Thank you.

Ms. Fitzpatrick, did the DOE itself actually recommend setting of goals?

Ms. FITZPATRICK. We have contacted each agency, yes, and encouraged them when we speak to them that they should analyze their own energy use, and that they should have internal goals based on that analysis.

Senator METZENBAUM. When did you do that?

Ms. FITZPATRICK. I have been personally visiting these agencies since, I guess, December.

Senator METZENBAUM. Since when?

Ms. FITZPATRICK. Last December. I believe that was the first visit I made. It was some time last year.

Senator METZENBAUM. How many of them have set goals?

Ms. FITZPATRICK. I don't know that I can answer that for the record. I would expect that this is a little bit soon for most of them to have completed their analysis and set some goals.

Senator METZENBAUM. Aren't you sort of making a case for a need for legislation because otherwise you are on a talk-talk exercise? I expect most of you to go out of office at the end of 1988. Are we going to get there in time?

Ms. FITZPATRICK. Well, that is one of the reasons why when we meet with them, we don't just meet with the people who could be out of office after the end of 1988. We also meet with their permanent career staffs and get them trained also. I understand that.

Senator METZENBAUM. Well, it just seems to me that I think it would be better to do it on a voluntary basis. The only thing is I found a lot of things in life just do not happen. They become a wish and a hope instead of a reality. And that is the reason this Senator thinks that since there is so much involved here and since we could save so many dollars, as well as so much energy, that we ought to move in that direction.

I want to thank each of the members of the panel. Thank you very much for joining us. We will have written questions to submit to each of you. Thank you very much.

Our next panel is Mr. G. C. North, Federal Market Manager of Honeywell, Inc.; William E. Long, Chairperson of the Michigan Public Service Commission; George Jackins, Chairman of the Energy Committee, the American Consulting Engineers Council; and Jeffrey Eckel of Eden Hannon & Company.

I thank the members of this panel for making their views available to us. Views of the energy service interests and the state government and private investors will be helpful to the committee in its consideration of Federal energy legislation.

Our first witness is Mr. North. You know we have a five minute rule, and so please proceed.

I want to also say to the panel that Senator Evans is going to Chair the hearing for much of the morning from this point on. The Chairman has another bill up at another committee. And I think I

am going to get it out this morning. I better be there to just to see that nothing goes askew.

Mr. North, we are happy to hear from you, sir.

STATEMENT OF GRANT C. NORTH, FEDERAL MARKET MANAGER, BUILDING SERVICES DIVISION, HONEYWELL, INC.

Mr. NORTH. Thank you, sir. I'm Skip North from Honeywell. We are a major supplier of products and services which increase building energy efficiency.

In the mid-1970s, Honeywell pioneered and gave credibility to a creative business practice involving customer payment for energy retrofits from energy savings. This evolved into today's shared energy performance contracting industry.

Honeywell's experience clearly demonstrates that performance contracting works in the private and non-Federal public sector.

Senator METZENBAUM. Tell us just for a second—I will give you a little extra—how does that shared energy efficiency and cost—how does that work? You install the equipment, and then say to the company we will share with you in a portion of the savings? Is that the concept that is involved?

Mr. NORTH. Yes, sir. That is the concept. There is no up-front capital investment. And ultimately the projects are funded out of savings.

Senator METZENBAUM. Is that a big factor in the industry today?

Mr. NORTH. I would say it is in the sense that where there is a budget shortfall involved and people want to make the changes, this is how they approach the project. However, the economics of it are such that most private sector organizations are more attracted by making the investment and capturing all of the return.

Senator METZENBAUM. Thank you very much. Please proceed.

Mr. NORTH. Yes, sir.

Senator METZENBAUM. You have a famous name I gather this month.

Mr. NORTH. No relation, sir.

I will turn to a couple of examples of performance contracting working in the non-Federal public sector. They are provided by Ohio and New Mexico school districts. In Ohio, districts in Cleveland and Cincinnati funded $600,000 in energy retrofits and paid for that from energy savings. A much smaller school in Albuquerque, New Mexico, had a corresponding figure of $30,000.

Now, the point I would like to make again is that there is no capital investment required on the front end, and thereby no financial risk. Maintenance staff productivity is increased, and best of all, these projects are generating positive cash flow for use on a discretional basis to improve education.

In passing Public Law 99-272, the shared energy savings law, Congress wisely recognized the potential to create cooperative government/industry ventures which would increase the productivity of energy resources required to achieve agency missions. Private investment and performance contracting are intended to save hundreds of millions of energy dollars each year and reduce dependence on foreign sources.

Honeywell agrees that this approach is well-suited for Federal agencies. And 99-272, shared energy savings, in our opinion makes sense for the Federal Government.

I have managed Honeywell's involvement with implementation of this new authority since its inception over a year ago. My purpose here is to help Congress, agency personnel and contractors to implement the program.

I will address three areas: first, overcoming barriers which impede agency implementation; second, steps which can be taken to increase contractor participation; and third, how the intent of S.1382 can help. Let's begin with agency implementation.

Here are, as we see it, two barriers and how they might be overcome in order to get implementation going within agencies. Point A, adapting Federal acquisition regulations to the new authority is new procurement and contracting ground. Agency procurement personnel would benefit from centralized guidance on the specifics of how to break the new ground and attract contractors.

Point B is that agency management has not been provided pragmatic reasons for making the new authority preferable to the status quo. For instance, managers are uncertain about how energy savings in this fiscal year will impact future operating budgets. Clear outcomes must be defined which reduce uncertainty. Give managers a reason to change, and they'll do it, and creating a sense of urgency with clear signals from Congress and the administration would help.

On the contractor side—am I supposed to stop now?

Senator METZENBAUM. Take another half minute.

Mr. NORTH. Okay.

Senator METZENBAUM. There are big jaws that come and pull you out of your seat. [Laughter.]

Mr. NORTH. I certainly do not want to get caught up in that.

On the contracting side, we feel there is an existing industry out there that is practicing performance contracting, and essentially it is a matter of adapting existing industry practice to the Federal Government. We are confident that it can work. We are anxious to continue our involvement with the program of making it work.

And I will just stop at this point.

[The prepared statement of Mr. North follows:]

HEARING TESTIMONY

TO THE

SENATE SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

THE HONORABLE H.M. METZENBAUM, CHAIRMAN

OF THE

SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

THE HONORABLE J.B. JOHNSTON, CHAIRMAN

PRESENTED BY:

GRANT C. NORTH

FEDERAL MARKET MANAGER

BUILDING SERVICES DIVISION

HONEYWELL, INCORPORATED

JULY 30, 1987

Subcommittee on Energy Regulation and Conservation Hearing

July 30, 1987

I'm Skip North, Federal Market Manager of Honeywell's Building Services Division. We are a major supplier of products and services which increase building energy efficiency.

In the mid-1970s, Honeywell pioneered and gave creditability to a creative business practice involving customer payment for equipment retrofits from energy savings. This evolved into today's shared energy-savings performance contracting.

Honeywell's experience clearly demonstrates performance contracting works in the private and non-federal public sectors. Practical examples in the public sector are provided by Ohio and New Mexico school districts. Ohio districts in Cleveland and Cincinnati funded $600,000 of equipment retrofits from energy savings. The corresponding figure in a small Albuquerque school was $30,000.

There's no front-end capital investment or financial risk. Maintenance staff productivity is increased. And best of all, the projects are generating positive cash flow for discretional use to improve education.

In passing Public Law 99-272, Congress wisely recognized the potential to create cooperative government-industry ventures which would increase the productivity of energy resources required to achieve agency missions. Private investment and performance contracting are intended to save hundreds of millions of energy dollars each year, and reduce dependence on foreign sources. Honeywell agrees this approach is well suited to federal agencies. 99-272 makes business sense for the government.

I've managed Honeywell's involvement with implementation of 99-272 since its inception over a year ago. My purpose here is to help Congress, agency personnel, and contractors to implement the program.

I will address three areas:

(1) Overcoming barriers which impede agency implementation;

(2) Steps which can be taken to increase contractor participation; and,

(3) How the intent of S-1382, the Federal Energy Management Improvement Act, can help.

Let's begin with agency implementation. Here are the two primary barriers we've perceived, and how they might be overcome.

First, adapting federal acquisition regulations to 99-272 is new procurement and contracting ground. Agency procurement personnel would benefit from centralized guidance on how to break the new ground. And, they should be clearly encouraged to do so. Getting pilot projects up would help immensely.

Second, agency management hasn't been given pragmatic reasons for making 99-272 implementation preferable to the status quo. For instance, managers are uncertain about how energy savings in this fiscal year will impact future operating budgets. Clear outcomes must be defined which reduce uncertainty. Give managers a reason to change. And create a sense of urgency with clear signals from Congress and the Administration.

The handling of both of these agency barriers would be facilitated by providing incentives as contemplated in S-1382.

On the contractor side, 99-272 implementation requires applying established performance contracting business practices to the federal government. To date, government solicitations have been out of step with such industry practice. Here are two steps which can be taken:

First, we believe government contracts to date have been overly one-sided. User-unfriendly solicitation documents, biased to over-protect the government and offload risk, have been served up. The government must attract contractors with solicitations which better recognize performance contracting is a joint venture. Since contractors can be successful in less burdensome markets, they seek out those to the exclusion of government markets.

Second, the government should apply industry experience, to truncate their learning curve and better follow industry business practice. Five solicitations have been issued to date, none of which has generated much contractor participation. I recommend a conscientious effort by the government to apply industry experience.

Here are some specific areas of industry experience the government should integrate into its solicitation and contracting approaches to facilitate 99-272 implementation:

(A) How Savings Are Shared

In performance contracting, contractors provide front-end capital investment. The time value of money drives contractors to satisfy their return on investment requirements in as short a time as possible. How savings are shared is important to contractors.

The norm of industry practice today is "guaranteed lease." Customers commit to a fixed payment flow, structured to satisfy contractor return on investment requirements. Contractors guarantee that at contract term, payments will not have exceeded savings.

By contrast, government solicitations call for variable payments to contractors based on a monthly sharing of measured savings. If there are no savings, there is no payment to the contractor. This approach lost favor in the industry years ago, as it proved to be more complicated, costly and adversarial than guaranteed leasing. It also increased contractor risk and made project financing harder to arrange.

(B) How Savings Are Measured

Industry experience has led contractors to adopt savings measurement methodologies customized to the energy conservation retrofits implemented, and appropriate to how such measurement is used. To control adversariality, understandability is key.

Government has been attracted to sophisticated methodologies such as linear regression and simulation. Because monthly measurements are contemplated by the government, such methods appear attractive and are mandated. More government flexibility is recommended.

(C) Savings Available To Be Shared

To date, most government solicitations have truncated the savings available to be shared. For example, demand, heating or cooling savings might be excluded.

This creates an artificially low savings pool. It drives the contractor to propose a lower contractual share for the government, because the government's actual share is higher.

(D) Technical Scope

If too narrow, the technical scope allowed by some government solicitations (i.e. replace a chiller; lighting) can result in unattractive returns. For instance, a small savings pool can lengthen the contract term and drive up the cost of financing. Narrow scope will also reduce contractor participation and truncate the creativity of those who do participate.

(E) Inflation

Multi-year contracts must allow the contractor to profitably amortize capital and recover operating costs. Energy rate caps, common to government solicitations, are out of step with industry practice.

(F) Operation

Along with equipment maintenance and repair requirements, solicitations call for "operation" by the contractor. This ambiguous requirement is a major source of uncertainty and risk for contractors. And, depending on how interpreted, very expensive.

(G) Government Performance

Contractors have learned performance contracting is a joint venture. Unless both parties perform, neither party wins. It is not clear to contractors what motivates government performance, or what the government's penalty is for non-performance.

Increased contractor participation will occur to the extent business incentives compatible with industry practice are offered by the government.

Similarly, agency personnel will respond to pragmatic incentives to implement 99-272. What's intended in S-1382, my last major point, will clearly help.

Honeywell doesn't presume to take a position on whether or not new legislation is necessary. However, we do support the general intent of S-1382, especially the part on agency incentives. Genuine 99-272 incentives are needed which clearly reduce perceived risks, and reward achievement.

I recommend four things:

(1) Provide for higher retainage incentives corresponding to higher performance achievement;

(2) It should be made clear Life Cycle Cost methodology is for internal use by agency personnel to foster investment decision consistency and differentiate alternative projects. Don't off-load life cycle cost analysis on contractors as a proposal requirement;

(3) To facilitate progress, require each agency to have an action plan which converts its long-term energy goal into medium-term milestones and short-term objectives. Goal-oriented management requires objectives, plans and accountability; and,

(4) Implementation of what's intended in S-1382 might benefit from a stronger use of words. I suggest synonyms like "assure" and "achieve" be used instead of the terms "promote" and "promotion." Then, for example, PURPOSE in Section 543 of S-1382 would change from "promote conservation" to "achieve conservation."

I thank the Subcommittee for its time and attention, and will answer questions from the membership.

79-266 O - 87 - 3

Senator METZENBAUM. You come from the private sector.

Mr. NORTH. Yes, sir.

Senator METZENBAUM. Do you find anything contradictory to the free enterprise system in passage of this bill?

Mr. NORTH. Are we talking 1382, Senator? No, sir, I don't. As a matter of fact, I think the idea of incentives is more consistent.

Senator METZENBAUM. Is there anything in our tax laws now that provides—at one time I think we had something that made it possible to get accelerated appreciation or something for energy conservation improvement. Is there anything in our law today on that subject?

Mr. NORTH. As a matter of fact, those tax incentives have been removed, Senator. And the impact of that on this industry is now projects have to stand on their economic or energy conservation merits.

Senator METZENBAUM. Thank you very much. That was my understanding, but I wasn't quite sure.

Mr. NORTH. Yes, sir.

Senator METZENBAUM. I knew you would know.

Senator Evans is here, and he has been good enough to indicate not only his concern about this subject, he has been a leader in the area. And we are happy to have him. And Senator Evans, I will be able to go to my Judiciary Committee.

Senator EVANS. I am sorry I was a little late.

Senator METZENBAUM. We are happy to have you. Our next witness is Mr. William Long, who is the Chairperson of the Michigan Public Service Commission. Mr. Long?

Senator EVANS [presiding]. I thank the Chairman. Thank you.

Mr. Long, proceed.

STATEMENT OF WILLIAM E. LONG, CHAIRPERSON, MICHIGAN PUBLIC SERVICE COMMISSION

Mr. LONG. Thanks, Senator.

I too am quite aware of our timing system here and so forth, so we will briefly summarize the prepared testimony that I have submitted.

Senator EVANS. That's all right. Now that I am here, I am here.

Mr. LONG. Fine.

Basically, first of all of course, we are pleased and thank the committee for inviting us to share with you a state government perspective working with local units of government, school districts and so forth, as Mr. North has just indicated from the private sector.

We at the State of Michigan level have been involved in aspects of this program for over the last four or five years. So, we will share that with you in that kind of perspective.

We have been involved in two types of activities primarily. One involves the energy financing and the performance contracting aspect of part of the discussion today. And the other is the broader type of activity that we think compliments that which involves incentives for energy management practices. And I think this committee wants to touch on both of those items.

In the energy financing area, the initiatives that we have been involved with there have come about as a result of use of both a combination of Federal and state dollars to the State of Michigan through the Public Service Commission, Office of Energy Programs. And we have used those Federal dollars to match with state dollars to provide a small staff to be basically the catalyst to get organizations and interest groups. I would describe that as a facilitator role, kind of a broker role. And that is the role that the state Public Service Commission Energy Program staff has used.

We have had about four major initiatives then at the state level that involve performance contracting and those incentives. The first was legislation. We passed state legislation very similar to 99-272 that cleared up any legal questions or impediments, at least we thought, particularly for local units of government, school districts, municipal governments and so on so that they were clear that they could enter into these longer term performance contracts.

The second effort we undertook was then—the legislation, of course—things didn't just because legislation passed. We had to then start the broker role. And that involved our staff then working through the associations, through the Michigan Municipal Association, the school board officials, hospital association, to bring them together, participate with us in identifying the technical information necessary to get familiar with this type of performance contracting, what legal documents would be necessary. We developed and worked with them in standardizing legal documents that they could share with their respective local districts and their members, if you will, so that they became familiar with it.

Then again, that was not enough. Then we had a kind of an actual let's do by experience. So, we had several pilot projects I would say, or demonstration projects, which involved public institutions. In this case a couple of school districts, Lansing school district, Inkster public schools, City of Royal Oak, actually then went through an audit process, went through the technical aspects necessary to enter into actual contracts for the performance contract approach.

Inkster recently signed a lease agreement, and installation is expected in August. The Lansing school district project has now been installed, and they are beginning to see the returns on their investment. And Royal Oak has a technical grievant report and is expected to make a decision within the next few months on proceeding with their project.

The last piece of this effort really involved more of the strategy than to demonstrate to the market, to the contractors, that there was, in fact, a market in Michigan beyond just these pilot projects. We did that by soliciting additional requests from the public institutions, the local governments. And we had from September to December of 1986, 10 formal solicitations were issued, 5 in school districts, 4 in cities, 1 in a private, nonprofit organization. The projects will represent about a total investment of approximately $2.3 million. And those projects now are in the process of negotiating final agreements.

The last piece of this was then further kind of—I guess I would describe this as a marketing effort, and that is one that we have then brought the contractors together to become more familiar

with Michigan's efforts. We have provided business opportunity guide for contractors. We have a program that allows the users to be able to develop the format for the contracting and so on. And so, it is basically a facilitating role.

I will not touch on the complimentary aspect that we see that has gone along with this. But primarily it is, in fact, a major information/education effort with our state and local institutions in encouraging management efficiencies in government. We do have legislation—and I know that the red light is on, so just let me wrap up.

Senator EVANS. All right.

Mr. LONG. We had legislation enacted just within the last two or three months that will allow at the state level the same degree of performance contracting. There was some confusion as to the legalities there. So, we have had legislation passed that will allow the performance contracting by state government departments, and we have the incentive approach in our legislation as well which provides that 75 percent of the savings occurring from the reductions in energy consumption will be allowed to be retained by that particular department or agency and directed toward further energy savings the next fiscal year. The remaining 25 percent would revert to the state general fund.

Thanks for the opportunity and I am, of course, available for questions.

[The prepared statement of Mr. Long follows:]

TESTIMONY ON

PROMOTING ENERGY EFFICIENCY ACTION

IN PUBLIC INSTITUTIONS

PRESENTED TO THE

U. S. SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

BY:

WILLIAM E. LONG, CHAIRPERSON
MICHIGAN PUBLIC SERVICE COMMISSION

JULY 30, 1987

*Attachments:

EEF Program Report
H.B. 4763

Thank you, Chairman Metzenbaum and members of the subcommittee, for inviting me to speak today on some of the innovative ways that Michigan is encouraging energy conservation investments and attention to more energy efficient operations in our public institutions. I am Bill Long, Chairman of the Michigan Public Service Commission, and accompanying me is Jan Patrick, Supervisor of the Commission's Energy Efficiency Financing staff.

My testimony today will outline two types of activities in which we are currently involved. The first part of the testimony will focus on initiatives in energy financing and the second on incentives for effective energy management practices.

I. Energy Efficiency Financing Program

The primary purpose of my testimony is to tell you how the Office of Energy Programs, part of the reorganized Public Service Commission, is combining federal and state dollars to help public institutions finance the cost of making energy conservation improvements through the use of performance contracting and other incentives. I would like to give you a brief overview of the development of services and major achievements of Michigan's Energy Efficiency Financing Program.

The role of the state in developing additional financing opportunities for public institutions has been largely facilitative. There have been four major steps: the first was a legislative incentive.

In 1984 and 1985, Michigan passed legislation which permitted local governments, community colleges and school districts to use special finance arrangements in pursuing energy conservation measures. The options included the sale of installment notes and bonds which would not require

voter approval and performance contracting arrangements. Last week, Governor Blanchard signed into law HB 4763 authorizing state administrative departments to enter into multi year purchase agreements for energy services. The Act (P.A. 122 of 1987) also creates an important incentive for taking conservation action, but I will describe that incentive in the second part of my remarks.

The authorization to use performance contracting was not likely to generate immediate action. The next step was to demonstrate how the approach would work and, in the process, overcome skepticism about its viability.

In 1985, the Office of Energy Programs initiated five projects, three in public institutions to accomplish the following objectives:

- identify issues related to applying this approach to municipalities and school districts;
- gain experience in providing technical support under the guidance of national experts;
- develop standardized legal documents, guide books, case studies and other tools that would facilitate the contracting process for each type of institution.

State associations including the Michigan Municipal League and Michigan School Business Officials were invited to participate as project cosponsors and provide invaluable assistance in publicizing major events and reviewing materials. The project sites received start up assistance from the state's consultants including help in developing particular solicitation documents and evaluating contractor proposals. After selecting a contractor, each site was offered additional assistance developing a model energy

conservation agreement and negotiating the final agreements. Case studies documenting the project process and outcomes were completed.

All three public demonstration sites selected Viron Corporation of Kansas City as the primary contractor. Lansing School District's project is substantially installed; Inkster Public Schools recently signed a lease agreement and installation is expected to begin in August; the City of Royal Oak has reviewed the technical agreement report and is expected to make a decision on next steps this month.

The third program strategy was to demonstrate the market for new contractors and to provide technical support to interested clients.

From September to December of 1986, ten formal solicitations were issued--five in school districts, four in cities, and one in a private nonprofit organization. The projects represent a potential investment of approximately $2.3 million. Less than one year later, eight sites were negotiating final agreements: one has decided to use bond financing and one has withdrawn from the process. I have attached a project schedule to the typed copy of my testimony. As a result of this initiative, Michigan has gained significant attention from the industries, experts in providing assistance to institutional clients and high visibility for the approach.

Despite the success of this initiative, future growth is largely dependent on increasing the number of firms willing to offer performance based agreements and on expanding the number of trained consultants who can help public clients procure such agreements. This understanding led Office of Energy Program staff to develop a fourth strategy--provide information services to contractors and consultants about public options and marketing potential for energy services agreements in Michigan.

In the past year, the Energy Efficiency Financing Program has developed and distributed a "Business Opportunities Guide for Contractors". This document offers a business viewpoint of the range of opportunities available from full service projects to subcontracting and covers issues that should be considered and researched for additional information. In June, the Office of Energy Programs sponsored three professional seminars to provide additional information and training in performance contracting for contractors and consultants. An initial public sector market survey report was distributed during the seminars. Fifty professionals attended, and participants' evaluations indicated overwhelming support for more advanced seminars in the future.

To conclude this part of my statement, I would like to point out that at least 150 municipalities and school districts that responded to our marketing survey are interested and, theoretically, have viable projects for performance contracts.

A large number of state-owned facilities have been added to this potential market as a result of P.A. 122. Each time we can provide assistance to these projects, we contribute to economic development as well as to energy conservation and efficiency. Such assistance which effectively leverages private investment is possible by combining future SECP dollars with our very limited state resources.

Performance contracting is a viable alternative but yet a complex process. Other incentives are needed to capture potential for energy savings. In Michigan, this is being done with a variety of incentive approaches. Let me give you just three examples as described in Section II.

II. Energy Management Incentives

The first incentive is a legislative provision which permits state administrative departments to recapture a portion of energy cost savings for additional energy conservation work. This provision enables state departments to carry over 75% of energy cost savings and allocate these funds to a special project account. In the first four years, $6 million was carried over for new projects by six departments. However, legislative concerns about the verifiability of savings led to cancellation of the option in 1985. Last week, the incentive was re-instated with appropriate safeguards in P.A. 122. The Public Service Commission will be responsible for tracking consumption records and substantiating energy savings of state buildings.

The second example is the Michigan Energy Managers' Grant offered to cities in our CEM energy management program. The grant is a two year, matching funds commitment which has permitted seven cities to hire or re-assign staff to energy management activities. The conditions for receiving a grant were 1) the city must provide a minimum soft match of 50% of the grant amount; and 2) the city must set a target for energy related cost avoidance greater than the Energy Manager's salary during the grant period. To assist in meeting the second condition, the Office of Energy Programs will provide technical training and assistance to the Energy Manager. The City of Southfield has just completed its first year in the program in June. The measured energy savings achieved by the Energy Manager ($36,180) from building improvements and the purchase of wellhead gas have already exceeded the State Grant funds provided to the City ($20,000). The savings' estimates in vehicle fleet operations are not yet available, however, Southfield's Energy Manager has completed the following tasks to improve fleet efficiency:

- downsized administrative vehicles from 8 cylinders to 4 and 6 cylinders;
- compiled fleet usage data and researched software packages which will facilitate recordkeeping; and
- discussed with Consumers Power Company the possibility of using compressed natural gas as a fuel source for selected city vehicles.

All the cities who are participating in this incentive program are showing energy savings which, in the aggregate, exceed our first year investment. That's an especially impressive record considering five of the seven cities have just completed three months in the program. The dollars to support the Energy Manager Grant program came from our federal SECP grant.

The third example is the State Physical Plant Association (SPPA) formed in 1978 to provide a focus for peer exchange and energy management public education for nearly 300 facility managers of colleges and universities and state administrative departments. The Association is staffed by the Office of Energy programs and planning committee. Its major activity is to conduct two one-day conferences a year.

SPPA conferences provide low-cost but powerful forums for recognition of successful energy management in state facilities. The Association's work also provides a focus for the Governor's energy management awards. While it is difficult to measure energy savings from training and recognition, SPPA's programs support the goals of the agency in accelerating energy efficiency in state operations.

Conclusion

Public institutions experience significant barriers in trying to reduce energy consumption and costs. Because the state has a stake in their success, we have taken initiatives to reduce these barriers. We believe that institutional inertia can be stimulated through alternative financing. Incentive programs are available. In Michigan we have defined the state's role through legislative initiatives, sponsorship of demonstration projects and energy management incentives.

ENERGY EFFICIENCY

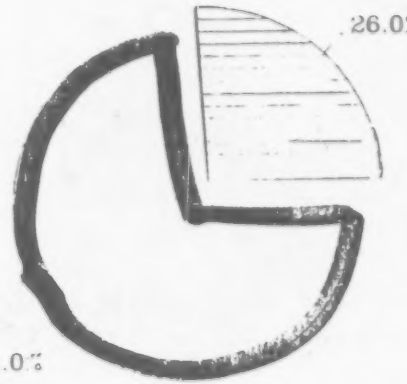
FINANCING

PROGRAM REPORT

Energy Efficiency Financing Section
Office of Energy Programs
Michigan Public Service Commission
July 1, 1987

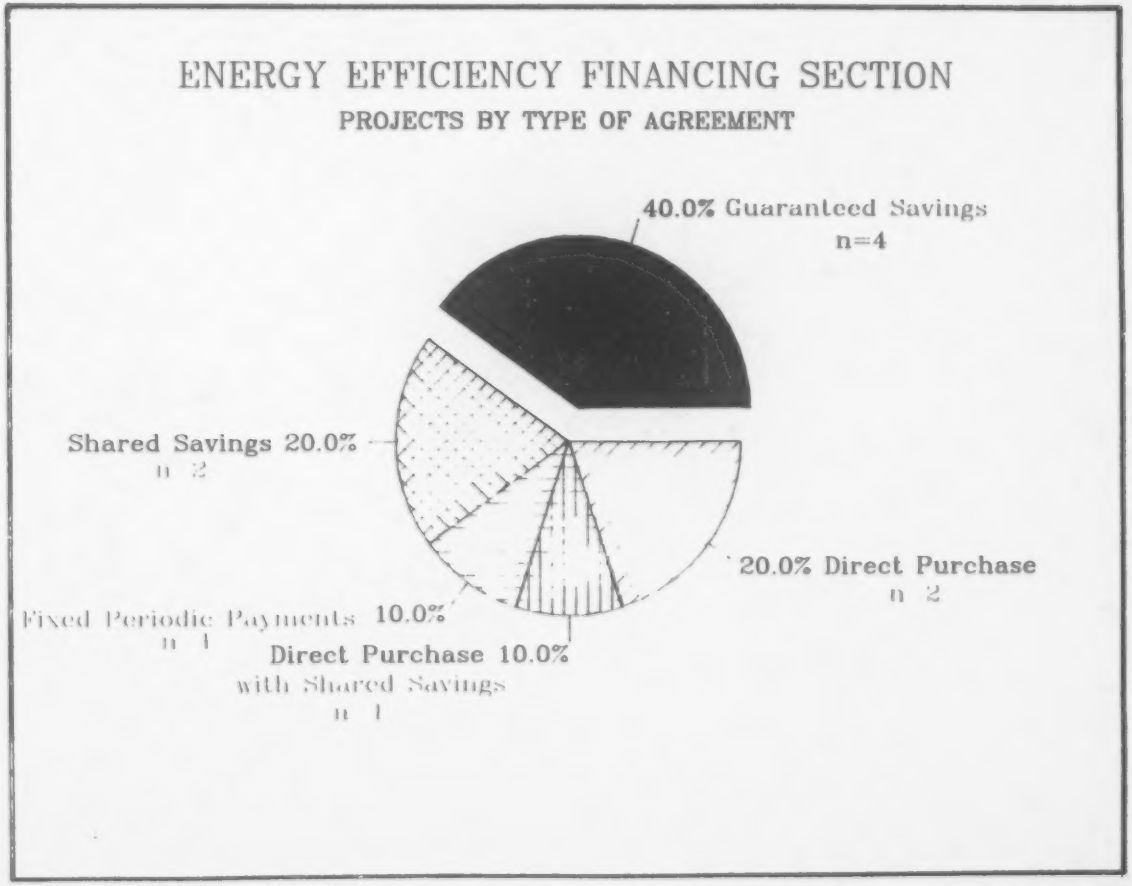
ENERGY EFFICIENCY FINANCING SECTION

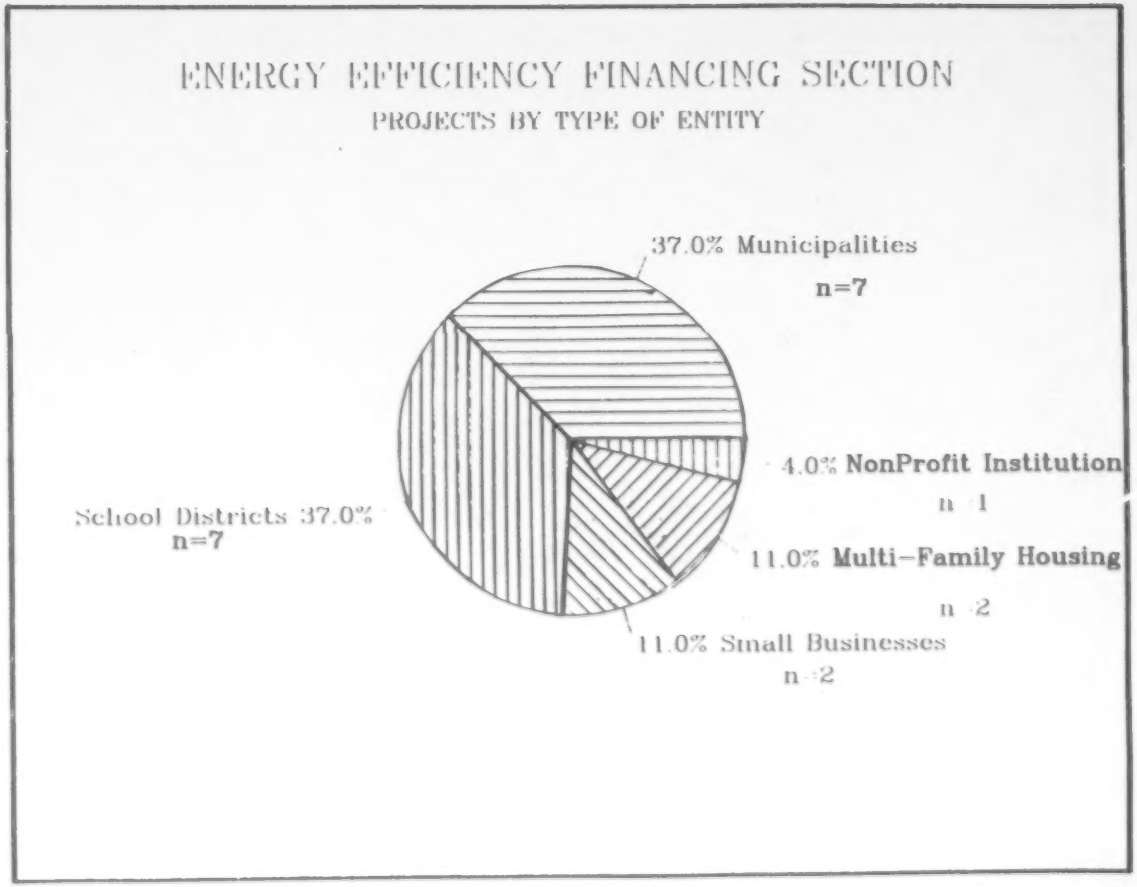
PROJECTS BY TYPE OF SECTOR

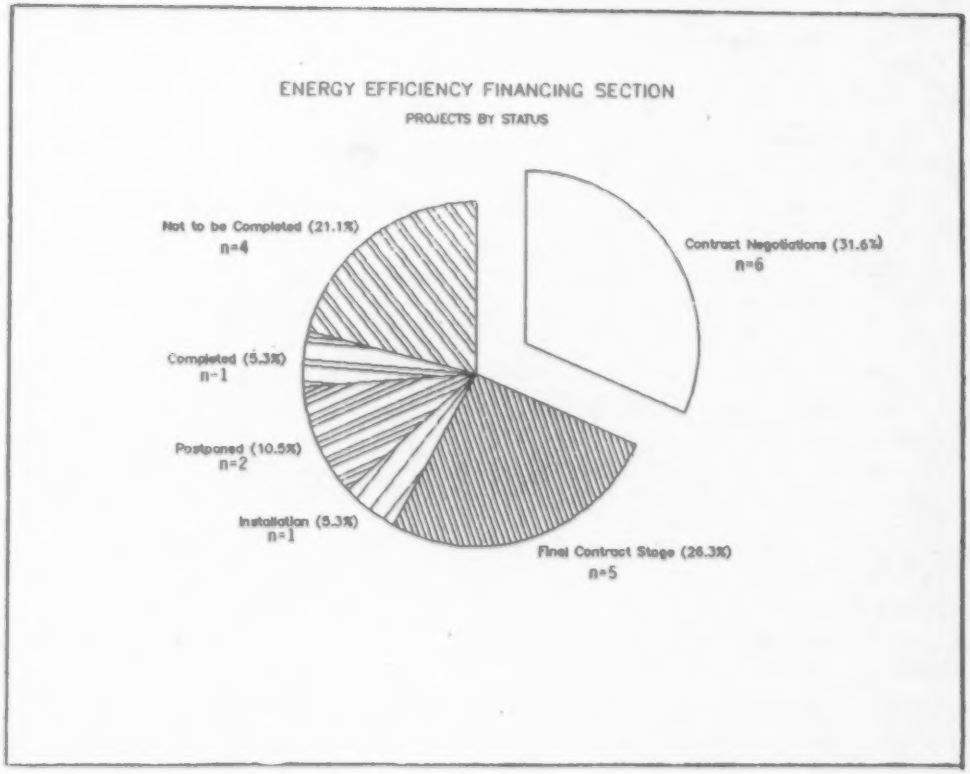


26.0% Private Sector
n=5

Public Sector 71.0%
n=14


ENERGY EFFICIENCY FINANCING SECTION
PROJECTS BY TYPE OF AGREEMENT
40.0% Guaranteed Savings
n=4
Shared Savings 20.0%
n 2
20.0% Direct Purchase
n 2
Fixed Periodic Payments 10.0%
n 1
Direct Purchase 10.0%
with Shared Savings
n 1


ENERGY EFFICIENCY FINANCING SECTION
PROJECTS BY TYPE OF ENTITY
37.0% Municipalities
n=7
4.0% NonProfit Institution
n=1
11.0% Multi-Family Housing
n=2
11.0% Small Businesses
n=2
School Districts 37.0%
n=7


ENERGY EFFICIENCY FINANCING SECTION
PROJECTS BY STATUS
Not to be Completed (21.1%)
n=4
Contract Negotiations (31.6%)
n=6
Completed (5.3%)
n=1
Postponed (10.5%)
n=2
Installation (5.3%)
n=1
Final Contract Stage (26.3%)
n=5

ENERGY EFFICIENCY FINANCING SECTION: PROJECT SUMMARY

ENTITY NAME	TYPE OF AGREEMENT	TERM	CONTRACTOR	BUILDINGS	ANNUAL SAVINGS	TERM SAVINGS	INVESTMENT	STATUS
MUNICIPALITIES:								
City of Royal Oak*	Guaranteed Savings	10	Viron Corporation	3	$49,096	$617,520	$150,594	Final Contract Stage
City of Battle Creek			Honeywell	14	$86,170	$1,184,837	$330,000	Not to be Completed
City of East Detroit				8				Solicitation Postponed
City of East Lansing	Purchase/Shared Savings	Variable	Energenics	3	$16,237		$40,000	Negotiating Agreement
City of Romulus				11				Preliminary Planning
City of Sault Ste. Marie	Guaranteed Savings	5	Honeywell	5	$19,225	$102,064	$65,425	Final Contract Stage
City of Westland	Shared Savings	8	GMC Energy Group	13	$119,390	$830,089	$540,583	Contract Postponed
SCHOOL DISTRICTS:								
Lansing School District*	Direct Purchase	1	Viron Corporation	10	$338,894	$338,894	$1,073,763	Installation
Inkster School District*	Guaranteed Savings	10	Viron Corporation	7	$130,865	$984,085	$375,000	Preliminary Contract
Hilpena School District	Direct Purchase	7	Johnson Controls	16	$159,800	$1,301,500	$361,000	Final Contract Stage
Crestwood School Dist.			Viron Corporation	6	$40,585	$1,139,368	$221,944	Negotiating Agreement
E. Lansing School Dist.			Honeywell	8	$69,284	$1,248,768	$241,000	Negotiating Agreement
Jackson School District			Impact Management	7				Negotiating Agreement
Sault Ste. Marie Schools	Guaranteed Savings	5	Honeywell	7	$83,492	$708,598	$215,489	Final Contract Stage
NOT-FOR-PROFIT INST:								
YMCA of Lansing*	Fixed Payments	5	Johnson Controls	3	$42,600	$312,900	$140,000	Final Contract Stage
SMALL BUSINESSES:								
Fleet Engineers*	--	--	--	1	$30,000	---	---	Not to be Completed
Hiber*	--	--	--	1	---	---	---	Not to be Completed
MULTI-FAMILY HOUSING:								
Wilson White Company*	--	--	Comptegyptte	7	$6,456	---	$14,066	Not to be Completed
Parkcrest Apartments*	Shared Savings Loan	5	Fishman	4	$13,350	$75,720	$42,355	Completed

NOTE: * indicates EEF demonstration project.

SENATE SUBSTITUTE FOR

HOUSE BILL NO. 4763

(As passed by the Senate June 29, 1987)

A bill to amend sections 113, 114, 219, and 221 of Act No. 431 of the Public Acts of 1984, entitled as amended "The management and budget act," being sections 18.1113, 18.1114, 18.1219, and 18.1221 of the Michigan Compiled Laws; and to add sections 253 and 254.

THE PEOPLE OF THE STATE OF MICHIGAN ENACT:

Section 1. Sections 113, 114, 219, and 221 of Act No. 431 of the Public Acts of 1984, being sections 18.1113, 18.1114, 18.1219, and 18.1221 of the Michigan Compiled Laws, are amended and sections 253 and 254 are added to read as follows:

Sec. 113. (1) "Community college" means a community college or a junior college.

(2) "Department" means the department of management and budget.

(3) "Directives" means intergovernmental, interagency, or interdepartment administrative or procedural guidelines or instructions which do not affect the rights of, or procedures and practices available to, the public.

(4) "Director" means the director of the department of management and budget.

(5) "ENERGY CONSERVATION MEASURE" MEANS IMPROVEMENT OF A BUILDING STRUCTURALLY OR THE INSTALLATION OF EQUIPMENT OR MATERIALS IN A BUILDING FOR THE PURPOSE OF REDUCING ENERGY CONSUMPTION OR COST, INCREASING ENERGY EFFICIENCY, OR ALLOWING THE USE OF A RENEWABLE RESOURCE FOR FUEL.

Sec. 114. (1) "Facility" means a building or structure along with the building's or structure's grounds, approaches, services, and appurtenances owned by, or leased through a building authority by, the state such as ~~the capitol building,~~ office buildings, research buildings, academic buildings, laboratories, hospitals, prisons, recreational structures, garages, warehouses, physical plant buildings, energy or power plants, and any other building or project included by the director if the director considers the building or project to be in the public interest. Facility does not include any of the following:

(a) A building or structure for an institution of higher education except as mutually agreed upon by the director and the governing board of the state institution of higher education.

(b) A road, bridge, or railroad under the jurisdiction of the state transportation department.

(c) An existing building or structure which is mutually agreed to be excluded from the definition of facility by the department and the state agency having jurisdiction over the building or structure.

(D) THE CAPITOL BUILDING AND GROUNDS. AS USED IN THIS SUBDIVISION, "GROUNDS" MEANS THE PROPERTY UPON WHICH THE STATE CAPITOL BUILDING IS SITUATED, BORDERED ON THE NORTH BY OTTAWA STREET; ON THE EAST BY CAPITOL AVENUE; ON THE SOUTH BY ALLEGAN STREET; AND ON THE WEST BY WALNUT STREET.

(2) "Fiscal agencies" means the senate fiscal agency and the house fiscal agency.

Sec. 219. The department may issue directives for the management, operation, maintenance, and repair of facilities. The director may determine space utilization standards. The department shall assign space, except ~~to the extent that space in the capitol building and other buildings and premises is reserved for the legislature. Space occupied by the legislature may not be removed from the legislature except as otherwise agreed by the leadership of the legislature.~~ SPACE IN THE CAPITOL BUILDING, AND EXCEPT TO THE EXTENT THAT SPACE IN BUILDINGS AND PREMISES OTHER THAN THE CAPITOL BUILDING IS RESERVED FOR THE LEGISLATURE. SPACE OCCUPIED BY THE LEGISLATURE SHALL NOT BE REMOVED FROM THE LEGISLATURE EXCEPT AS OTHERWISE AGREED BY THE LEADERSHIP OF THE LEGISLATURE.

Sec. 221. (1) The director may provide for the rental and lease of land and facilities for the use of state agencies in the

manner provided by law. The rentals and leases shall not be effective unless approved by the board.

(2) The department may grant easements, upon terms and conditions the board determines are just and reasonable, for ~~the purpose of~~ HIGHWAY AND ROAD PURPOSES, AND FOR constructing, operating, and maintaining pipelines or electric, telephone, telegraph, television, gas, sanitary sewer, storm sewer, or other utility lines including all supporting fixtures and other appurtenances over, through, under, upon, and across any land belonging to this state, except lands under the jurisdiction of the department of natural resources, the department of military affairs, or the state transportation department.

(3) The department shall determine annually the prevailing market rental values of all state owned office facilities and facilities which provide private housing for state employees. The rental values determined pursuant to this subsection shall not be effective unless approved by the board. The renting and leasing of excess state owned land and buildings to private and public entities shall be at prevailing market rental values.

(4) The department shall determine the rentals for occupancy of the department of labor building in the city of Detroit pursuant to section 223.

SEC. 253. A STATE AGENCY MAY ENTER INTO A MULTI-YEAR CONTRACT FOR ENERGY CONSERVATION IMPROVEMENTS TO STATE FACILITIES WHICH WOULD BE PAID FOR FROM THE AVOIDED OPERATING COSTS FOR UTILITY SERVICE OR FUEL PRODUCED BY THE IMPROVEMENTS.

SEC. 254. (1) UPON THE REQUEST OF A STATE AGENCY, THE PUBLIC SERVICE COMMISSION SHALL PROVIDE TO THE STATE AGENCY A CERTIFICATE OF ENERGY COST SAVINGS BASED UPON ACTUAL ENERGY USE AND COST DATA AS PROVIDED TO THE COMMISSION BY THE STATE AGENCY.

(2) AT THE CLOSE OF EACH FISCAL YEAR, THE AMOUNT OF ANY UNENCUMBERED BALANCE OF A STATE APPROPRIATION FOR FUEL OR UTILITIES TO A STATE AGENCY WHICH RESULTED DUE TO ENERGY MANAGEMENT ACTIONS AS CERTIFIED BY THE PUBLIC SERVICE COMMISSION, AS PROVIDED IN SUBSECTION (1), SHALL BE DISTRIBUTED AS FOLLOWS:

(A) 75% OF THE ENERGY COST SAVINGS, AS CERTIFIED BY THE COMMISSION, SHALL BE CARRIED FORWARD TO THE NEXT FISCAL YEAR AND ALLOCATED TO A SPECIAL ENERGY CONSERVATION WORK ORDER OR WORK PROJECT ACCOUNT TO BE USED FOR ENERGY CONSERVATION MEASURES IN THE FACILITIES OF THE STATE AGENCY TO WHICH THE CERTIFICATE WAS ISSUED.

(B) THE REMAINING UNENCUMBERED BALANCE SHALL BE CREDITED TO THE FUND FROM WHICH APPROPRIATED.

Section 2. This amendatory act shall not take effect unless House Bill No. 4776 of the 84th Legislature is enacted into law.

Senator EVANS. Thank you very much.

We will proceed on now to George Jackins, Chairman of the Energy Committee, American Consulting Engineers Council.

STATEMENT OF GEORGE JACKINS, CHAIRMAN, ENERGY COMMITTEE, AMERICAN CONSULTING ENGINEERS COUNCIL

Mr. JACKINS. Good morning, Mr. Chairman.

Senator EVANS. Good morning.

Mr. JACKINS. I understand that you have some personal involvement or have had some personal involvement with our organization, and I am pleased to know that.

I am an independent businessman. I am president of consulting engineering firm in Birmingham, Alabama that has had extensive involvement in energy related matters during the past decade.

I am currently the chairman of the American Consulting Engineers Council Energy Committee, which I represent today. On behalf of the 4700 members of the American Consulting Engineers Council, approximately one-third of which do energy related work, I would like to express my sincere appreciation for being afforded this opportunity to speak before the subcommittee.

We understand and support the Federal Government's desire to aggressively promote energy conservation and cost containment in their facilities. My comments specifically address current and proposed legislation regarding performance based or shared savings contracting as a method of deferring the Federal Government's cost and risk of implementation to the private sector.

In addition, I wish to communicate to the committee the American Consulting Engineers Council position on performance contracting. This position is based on direct experience in the successful development and implementation of energy conservation programs for thousands of public and private sector clients by consulting engineers. If properly structured, performance contracting is a legitimate and useful tool for providing the capital necessary to implement energy conservation measures. However, we feel the current and proposed legislation, while it has begun to solve some of the legal and institutional barriers, has not resolved all of the problems necessary to make this new financing vehicle work.

Our recommendations outlined in more detail in my written statement would produce the following results: provide a clear understanding to the facility managers of the benefits available to each facility so they have an incentive to participate; supply current data form which logical investment decisions could be made by agency managers; give the facility manager the opportunity to become intimately involved in the decision making process; provide for a specific scope of work; would not be so restrictive from a business standpoint that energy services contractors would refuse to respond; and would deliver to the Federal Government a workable vehicle for accomplishing aggressive energy cost containment projects at minimal expense.

There are few incentives for managers of Federal facilities to initiate aggressive energy cost containment programs. Section 548 of the proposed amendments to the NECPA addresses this point, but it is vague. We would propose a change in the wording to be more

specific and to encourage Federal managers with quantifiable budget results.

The Federal Government has a consistent policy of requiring procurement to be based on competitive pricing for goods and services. Our point is a simple one. If you do not specify a distinct scope of work, contractors will not have sufficient information from which to base legitimate responses.

Over the past 10 years, the Federal Government has expended well over $30 million to pay for energy studies by consulting engineers. For the most part, the Federal Government has not had the funding necessary to proceed with implementing even the most cost-effective measures identified in these studies. It only seems logical to begin by using the information it has already paid to receive. We believe that the traditional policy of retaining objective consulting engineers to perform future energy conservation studies will get this program moving, and once moving, assure that it works.

It is important to remember that unlike energy services companies, consulting engineers do not have a profit interest in the recommendations made. We have no interest in selling or leasing equipment.

The utilization of consulting engineers knowledgeable of the concerns and needs of the Federal Government, coupled with sensitivity to the requirements of the performance financing contractors, will provide the missing link needed to structure successful projects. The shared savings laws have had the unintended effect of removing consulting engineers from this traditional role.

It is also our belief that if the recent pilot projects had involved consulting engineers from the beginning, they would have had an improved opportunity for success.

In conclusion, the points we raise and our recommendations are intended to promote a course of action that we feel confident will work. We want the shared savings concept to succeed, but the initial law only a few paragraphs long raised more questions that it answered. Congress has the right idea. It just needs some fine tuning.

That concludes my oral testimony, and I would be glad to answer any questions.

[The prepared statement of Mr. Jackins follows:]

TESTIMONY

OF

GEORGE JACKINS

Energy Management Consultants

Birmingham, Alabama

Representing
The Energy Committee of the
AMERICAN CONSULTING ENGINEERS COUNCIL

to the
SENATE ENERGY AND NATURAL RESOURCES SUBCOMMITTEE
ON REGULATION AND CONSERVATION

on
S.1382, Amendments to the
NATIONAL ENERGY CONSERVATION POLICY ACT

July 30, 1987

TESTIMONY OF:

GEORGE A. JACKINS, JR., P.E.,
CHAIRMAN, ENERGY COMMITTEE
AMERICAN CONSULTING ENGINEERS COUNCIL

JULY 30, 1987

Good morning (afternoon) Mr. Chairman. My name is George Jackins. I am an independent businessman and am President of Energy Management Consultants, a consulting engineering firm based in Birmingham, Alabama. I am a graduate of Georgia Tech and a registered engineer in Alabama, Georgia, Tennessee, Mississippi and Florida.

I have been active in ASHRAE (The American Society of Heating, Refrigerating, and Air Conditioning Engineers), the National Society of Professional Engineers, the Association of Energy Engineers, and the American Consulting Engineers Council. I am currently the chairman of the American Consulting Engineers Council's Energy Committee, which I represent today.

On behalf of the 4700 members of the American Consulting Engineers Council (ACEC), approximately one-third of which do energy-related work, I would like to express my sincere appreciation for being afforded this opportunity to speak before the Sub-

committee. I would like to summarize my statement and ask that the complete written version be placed in the record. We understand and support the federal government's desire to aggressively promote energy conservation and cost containment in their facilities. My comments specifically address current and proposed legislation regarding performance-based contracting (shared savings) as a method of deferring the federal government's cost and risk of implementation to the private sector.

In addition, I wish to communicate to the Committee the American Consulting Engineers Council's position on performance contracting. This position is based on direct experience in the successful development and implementation of energy conservation programs for thousands of public and private sector clients.

If properly structured, performance contracting is a legitimate and useful tool for providing the capital necessary to implement energy conservation measures. However, we feel the current and proposed legislation, while it has begun to solve some of the legal and institutional barriers, has not resolved all of the problems necessary to make this new financing vehicle work. The following points reflect experience with the energy conservation efforts of the federal government. It is also based

on ACEC members' contacts with federal personnel at the working level (base commanders, engineering staffs, etc.) responsible for the initiation and implementation of energy conservation efforts.

Our recommendations, outlined in more detail in my written statement, would produce the following results:

- o Provide a clear understanding to facility managers of the benefits available to each facility, therefore making the process more marketable;
- o Supply current data from which logical investment decisions could be made by agency managers;
- o Give the facility manager the opportunity to become intimately involved in the decision-making process, thereby removing the notion that they would lose control of their buildings to contractors.
- o Provide for a specific scope of work, thereby allowing energy service contractors to bid their goods and services and make possible contractor selection based on non-subjective evaluation criteria;
- o Would not be so restrictive from a business standpoint that energy service contractors would refuse to respond

or not be able to exhibit their ability to innovate;

- And, would deliver to the federal government a workable vehicle for accomplishing aggressive energy cost containment projects at minimal expense.

RELEVANT POINTS

1. Multi-year Contracts. Title VIII, Section 801 of the National Energy Conservation Policy Act (NECPA), as passed by the 99th Congress, gave the head of any federal agency the authority to enter into "Shared Savings" contracts for up to 25 years. It simultaneously states in Section 802 that no federal agency may obligate funds beyond any single fiscal year. This inconsistenc" creates disincentives for private firms to commit capital to projects which may not be reauthorized.

2. Incentive. There are few incentives for managers of federal facilities to initiate aggressive energy cost containment programs. Section 548, of the proposed amendments to NECPA, addresses this point, but is vague.

"Such a program shall consist of arrangements in which the managers of federal buildings or communities of federal

buildings of the agency retain a portion of the dollar savings which result from their conservation measures to undertake further conservation measures. An additional portion may be retained for furthering the objectives of the agency."

We would propose a change in the wording to be more specific and to encourage federal managers with quantifiable budget results.

Line 24, Page 7: Replace "Retain a portion of the dollar savings" with "Retain 50% of the dollar savings."

Lines 1 & 2, Page 8: Replace "An additional portion may be retained for furthering the objectives of that agency," with "The remaining 50% of the dollar savings will be retained for furthering the objectives of that agency."

These changes would provide federal agency personnel with quantifiable benefits that would accrue to the agency, thereby significantly improving incentives to participate in the program.

3. Competitive Bidding. The federal government has a consistent policy of requiring procurement to be based on pricing for goods and services. Our point is a simple one. If you do not specify a distinct scope of work, contractors will not have sufficient information from which to base a legitimate response. This situation creates an inability to compare pricing structures from various respondents and renders useless the traditional federal purchasing policy of competitive bidding for the purchase of goods and non-professional services.

If the federal government is too restrictive from a business standpoint, the energy service contractors would be forced to engineer the requested energy conservation measures, at great expense, in order to be able to propose in a responsible fashion. This clearly is the other extreme and will not work. The failure of this method is typified by the fact that none of the shared savings pilot projects attempted in the past year have succeeded in getting a single contractor to the table.

Our recommendations address this critical problem, and are based on years of successful implementation of energy conservation projects where non-federal public entities have utilized the goods, services, and financing of energy service

companies to fully capitalize the implementation process. The following is a brief description of our recommendations:

A. Performance of Energy Conservation Studies. Over the past ten years, the federal government has expended well over $30 million to pay for energy studies by consulting engineers for the vast majority of its buildings. These studies have served their purpose in that they have identified energy conservation measures as well as provided specific construction budget and annual energy cost reduction estimates. For the most part, the federal government has not had the funding necessary to proceed with implementing even the most cost-effective measures identified in these studies. If a federal facility wants to proceed with an implementation process, regardless of the financing vehicle, it only seems logical to begin by using the information it has already paid to receive. We believe that the traditional policy of retaining objective consulting engineers to perform future energy conservation studies will get this program moving, and once moving assure that it works. It is important to remember that unlike energy service companies, consulting engineers do not have a profit interest in the recommendations made. We have no interest in selling or leasing equipment.

B. Project Implementation. Traditionally, the implementation of energy retrofit measures to buildings has involved the use of consulting engineers and architects, for a fee, to provide design, bid specification preparation, assistance in contractor selection and construction supervision services. Due to the fact that all of these services are still necessary, we propose that the long established relationship between the federal government and private sector design professionals continue. The utilization of consulting engineers, knowledgeable of the concerns and needs of the federal government, coupled with a sensitivity to the requirements of performance-financing contractors, will provide the "missing link" needed to structure successful projects. The shared-savings law has had the unintended effect of removing consulting engineers from this traditional role. It is also our belief that if the recent pilot projects had involved consulting engineers from the beginning, they would have had an improved opportunity for success.

We do not make this statement without basis. Many consulting energy engineering firms, since the advent of alternative financing, have added internal capabilities and have proven experience which would allow them to deal with the complexities

of developing performance contracting bid packages. These additional capabilities include resolving procurement problems and developing mutually agreeable methods of determining energy cost savings. They also can produce project financing models geared toward the desires of the facility, as well as representing the owner in their desire to "get the best deal."

C. Costs. Current legislation, relevant to this area, is quite clear regarding the fact that the federal government does not wish to bear any expense in the implementation process. We believe, however, that the federal government should bear the expense, if warranted, to update the energy conservation studies in order to reflect current opportunities and construction cost estimates.

Payment for consulting engineering services by the federal government appears to conflict with its desire not to expend funding for this purpose. The solution, however, is consulting engineers have been successful at packaging such projects where the net cost to the owner was zero. These arrangements required the successful energy service contractor to reimburse the owner for all expenses incurred for retaining the project consultant. The same could be done for the federal government.

Once completed, the study would then become the cornerstone of all implementation decisions beyond that point. If alternative financing is determined to provide the best option for raising capital, in lieu of investing internal funds, then the facility should retain a consulting firm to prepare design and bid specification documents which would identify a specific scope of work as well as communicate all relevant contractual requirements.

In conclusion, the points we raise and our recommendations are intended to promote a course of action that we feel confident will work. We want the shared-savings concept to succeed, but the initial law, only a couple of paragraphs long, raised more questions than it answered. Congress had the right idea. It just needs a little fine tuning. That concludes my oral testimony. I would be glad to respond to any questions.

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gaj/erb/ssc

Senator EVANS. Thank you very much.

Our fourth member of the panel is Jeffrey Eckel of Eden Hannon & Company from Alexandria, Virginia. Mr. Eckel?

STATEMENT OF JEFFREY W. ECKEL, VICE PRESIDENT, EDEN HANNON & CO.

Mr. ECKEL. Good morning.

By way of introduction, I am Vice President with Eden Hannon & Company, an investment banking firm located in Alexandria, Virginia.

Eden Hannon & Company has financed over a half billion dollars of assets with almost a quarter billion dollars in Federal transactions alone. Federal agencies for which we have provided third party financing include the House of Representatives, U.S. Geological Survey, Postal Service, VA, Navy, NASA, and the Patent and Trademark Office. Our most recent transaction was financing the construction of a 25 megawatt steam turbine generator for the Department of Energy's Energy Technology Engineering Center operated by Rockwell International.

I have been asked by the staff of the subcommittee to address two specific questions: Why have the results of the Federal Government's shared savings initiative of the National Energy Conservation Policy Act been disappointing to date, and would the proposed Senate Bill 1382 improve the results?

In answer to the first question, it is my observation that it may be premature to judge the results as disappointing given that the original legislation is less than two years old. Certainly there have been several starts and stops in the program, but it is our experience that most energy projects have unfortunately a two to three year development cycle prior to commencement of construction or installation. For instance, the DOE/Rockwell project was four years in the development phase and will not begin operating for another 12 months. Even the simplest technology or project generally has a number of unique and complicating factors that makes implementation much slower than anyone ever anticipates.

The Federal Government's performance in implementing energy projects does not, as yet, compare unfavorably to the private sector's experience.

Regarding the second question, one element of Senate Bill 1382 element that appears to be quite desirable is the sharing of savings with the agencies. We are currently working with one major defense contractor to develop a conservation equipment leasing program where the contractor is able to retain a portion of the savings. This contractor's current inability to retain any savings is a large disincentive to it to pursue these programs. Any program that allows agencies, as well as its contractors, to retain a portion of their savings would be welcome.

Assuming that either the existing legislation or the proposed legislation produces projects sufficient to satisfy the subcommittee's goals for the program, it may be most appropriate for me to address the investment community's perspective on shared savings financing.

It is my impression that the terms "shared savings," "performance contracting," and "third party financing" are used somewhat interchangeably. This is unfortunate because the terms have very different meanings to the investment community causing considerable confusion. By defining the terms from the investment community's perspective, it may be possible to more clearly see how to achieve the objective of the original legislation, that of inducing third party investors to invest in Federal energy projects. I would summarize the third party financing options available to the Federal Government in three categories: Shared savings financing, project financing and lease financing.

Shared savings, sometimes known as performance contracting, is typically described as a technique in which a contractor makes an investment in energy equipment and earns a return based on the performance of the system. Generally the contractor assumes a significant set of risks for a significant return. Typically the technology is an energy conserving technology, such as variable speed fans, rather than an energy producing technology, such as cogeneration.

Project financing is a related financing technique with important differences. Generally project financings involve many parties, not just one energy service company. The reason for multiple parties is to place the many risks of these transactions on the party best able to handle the risk. For example, a constructor has a risk of completing a project on time and on budget. The vendor has a equipment performance risk. And the lender has interest rate and credit risk and termination for convenience risk.

The project's participants are tied together contractually so as to insure the project will be able to service the debt over the project life.

They are very legal intensive transactions, and for that reason project financings are typically used with larger energy producing projects like cogeneration.

Lease financing is the third financing structure applicable to energy projects. Lease financing is not typically used for the purpose of transferring a project's technical or economic risks to a third party, but rather is used solely as a means to acquire third party capital. In many respects lease financing, using a lease-to-purchase or LTOP structure, represents the simplest means of attracting third party capital to the Federal energy table.

Because the transactions are relatively less expensive to consummate than either shared savings or project financings, they are applicable to either small or large projects, and depending on the strength of the lessee's obligation to pay, can be usefully applied to energy conservation technologies that possess few fungible assets, as well as larger cogeneration projects.

It is important to note that each structure has its place in the Federal energy conservation market, but that each structure is not equally useful for financing every project. The best structure is a function of technology, size, location, contract term, and a host of other factors. Maximum flexibility should be allowed in the contracting structure to the commercial relationship between the Federal Government and vendor or contractor.

That concludes my testimony.

[The prepared statement of Mr. Eckel follows:]

Testimony of

Jeffrey W. Eckel
Vice President
Eden Hannon & Company

to the

Senate Subcommittee on Regulation and Conservation

on

S.1382 Amendment to the NATIONAL ENERGY CONSERVATION POLICY ACT
July 30, 1987

Good morning Mr. Chairman. It is a pleasure to have this opportunity to assist the Subcommittee in its effort to conserve energy for the federal government.

INTRODUCTION

By way of introduction, my name is Jeffrey Eckel. I am Vice President with Eden Hannon & Company, an investment banking firm located in Alexandria, Virginia specializing in federal, energy and industrial project finance. Eden Hannon & Company has financed over one half billion dollars of assets, with almost a quarter billion dollars in federal transactions alone. Federal agencies for which we have provided third party financing include: the U.S. House of Representatives, U.S. Geological Survey, U.S. Postal Service, Veterans Administration, U.S. Navy, NASA, and the Patent and Trademark Office. Our most recent transaction was financing the construction of a 25 mw steam turbine and generator for the Department of Energy's Energy Technology Engineering Center (ETEC) operated by Rockwell International. I received my B. A. from Miami University and a Masters in Public Administration degree from Syracuse University.

I have been asked by the staff of the Subcommittee to address two specific questions:

- Why have the results of the federal government's shared savings initiative of the National Energy Conservation Policy Act, been disappointing to date?

  and;

- Would the proposed Senate Bill 1382 improve the results?

Reasons for Lack of Progress

In answer to the first question, it is my observation that it may be premature to judge the results as disappointing given that the original legislation is less than two years old. Certainly there have been several starts and stops in the program, but it is our experience that most energy projects have, unfortunately, a two to three year development cycle prior to commencement of construction or installation. For instance, the DOE-Rockwell project was four years in the development phase and

will not begin operating for another twelve months. Even the simplest technology or project generally has a number of unique and complicating factors that makes implementation much slower than anyone ever anticipates. The federal government's performance in implementing energy projects does not, as yet, compare unfavorably to the private sector's experience.

Would Senate Bill 1382 Help?

Regarding the second question, one element of S.1382 that appears to be quite desirable is the sharing of savings with the agencies. We are currently working to develop a conservation equipment leasing program for a contractor operated facility under which the contractor is able to retain a portion of the savings. This contractor's current inability to retain any savings is a large disincentive to it to pursue these programs. Any program that allows agencies as well as its contractors to retain a portion of their savings would be welcome.

Assuming that either the existing legislation or the proposed legislation produces energy saving projects sufficient to satisfy the Subcommittee's goals for the program, it may be more appropriate for me to address the investment community's perspective on shared savings financing. It is my impression that the terms "shared savings", "performance contracting" and "third party financing" are used somewhat interchangeably. This is unfortunate because the terms have very different meanings to the investment community, causing considerable confusion in an already complicated business. By defining the terms from the investment community's perspective and describing the characteristics of the several third party financing techniques available, it may be possible to more clearly see how to achieve the objective of the original legislation -- that of inducing third party investors to invest in federal energy projects. I would summarize the third party financing options available to the federal government in three categories -- shared savings financing, project financing and lease financing.

Shared Savings Financing

Shared savings, sometimes known as performance contracting, is typically described as a technique in which a contractor makes an investment in energy equipment and earns a return based on the performance of the system. Generally, the contractor is

assuming a significant set of risks -- all performance risk, fuel price risk, operations and maintenance risk, technological risk and interest rate risk -- all for a significant return. The transaction can be structured many ways but three typical methods are (1) a guaranteed discount; (2) a sharing of gross savings; (3) or a sharing of net savings. There is generally a significant amount of effort devoted to establishing a baseline and monitoring actual performance over the project's life. Typically the technology is an energy conserving technology , such as variable speed fans, rather than an energy producing technology such as cogeneration. Most often these projects are on the smaller side in terms of invested capital (although not necessarily) and are financed most frequently by vendors or energy service companies using internal, non-project specific funds. Typically the investment is in the form of equity and is not generally leveraged with debt.

Project Financing

Project financing is a related financing technique with important differences. Generally project financings involve many parties, not just one energy service company. The reason for multiple parties, such as a constructor, vendor, fuel supplier, operator, lender and equity investor, is to place the many risks of these transactions on the party best able to handle the risk. For example, the constructor has the risk of completing the project on time and on budget, the vendor has equipment performance risk, and the lender has interest rate risk and termination for convenience risk. Project financings are typically highly leveraged with non-recourse debt, for which the lender's sole security for repayment of principal and interest is the performance of the project. For that reason, the project's participant's are tied together contractually so as to ensure the project will be able to service the debt over the project life. They are very legal intensive transactions and for that reason, project financings are typically used with larger energy producing projects, such as a cogeneration project.

Lease Financing

Lease financing is a third financing structure applicable to energy projects. Lease financing is not typically used for the purpose of transferring a project's technical or economic risks to a third party, but rather is used solely as a means to acquire third party capital. In many respects lease financing using a lease-to-purchase (LTOP)

structure represents the simplest means of attracting third party capital to the federal energy table. Without all of the other project related risks to worry about, a lessor or lender can focus on and come to grips with the risks that are most important to it -- credit risk and interest rate risk. Because the transactions are relatively less expensive to consummate than either shared savings or project financings, they are applicable to either small or large projects and depending on the strength of the lessee's obligation to pay, can be usefully applied to energy conservation technologies with few fungible assets as well as larger cogeneration projects.

Having, hopefully provided some structure to the generic concept of third party financing, the types of projects the investment community likes to finance can be more easily answered. Shared savings projects are the most difficult projects to finance due to the combination of multiple non-financial risks, generally small size, frequently non-fungible assets and difficult-to-measure performance. This is not to say shared savings projects are unfinanceable, just more difficult. Project financings are the next most difficult transaction to finance, followed by lease financing which is the simplest transaction to finance.

It is important to note that each structure has its place in the federal energy conservation market, but that each structure is not equally useful for financing every project. The best structure is a function of technology, size, location, term and a host of other factors. Maximum flexibility should be allowed for structuring the commercial relationship between the federal government and the contractor.

Senator EVANS. Thank you very much, and I thank all of the panel.

A couple of general questions first. Is there any reason, in your view, if an analysis were to be done of a Federal agency or a series of Federal agencies to identify potential energy savings and a payoff time for those savings, and the payoff time is a year or less, which could easily be the case in some kinds of energy savings, that we would need to have extensive or expensive requests for projects or anything like that? Couldn't we just order the agencies to proceed forthwith and, out of internally generated funds, accomplish anything that can be financed in less than a one year period?

By its very nature, they have the money to do it. If they think they can get the payoff or if that analysis is reasonably accurate, it would only start with that as almost an initial mandate.

Mr. LONG. I'll comment by the observation that that probably was a better question for that earlier panel that was here than this panel since we are involved—but I will comment from a state perspective.

Senator EVANS. Unfortunately, I did not have a chance to ask it.

Mr. LONG. I know that.

And I think the answer is probably, yes, it does make sense, but again from a state perspective. And I do not pretend to understand the Federal procurement practices or reporting or accountability because that is what we are talking about.

Senator EVANS. In Michigan, do you have an annual or a biennial budget?

Mr. LONG. Annual budget. You were governor of Washington. Correct?

Senator EVANS. That's right. We still have a biennial budget in Washington, and we embarked on an energy savings program. At the time we embarked on it, I had left office as governor, but I was president of a State college. I asked each of the departments in the college to prepare their ideas of what they could do for energy savings. They were probably more enthusiastic than the average since I was serving at the same time as chairman of the Pacific Northwest Power Council. One of our major thrusts was energy conservation.

Many of the departments returned with programs with payoffs all the way from six months to six years. We went through the list and I checked off everything that had less than a two year payoff and to their surprise and astonishment, said we'll do it. They were all very happy until I told them they would do it with their current budgets because they had already indicated that they could get the payoff back in less time than the budget covered.

It seems to me that a pretty good place to start is with our own agencies. Mr. Long, you might respond particularly to this. What do you think it takes to get some enthusiasm over that? If the payback is 9 months or 11 months, should they keep the benefits of the full year or for that full year and the next year, or rather some specific portion of the savings for a more extended period of time?

Mr. LONG. I think we need some incentive, and that is built into the proposed legislation. In Michigan the legislature allowed the state agencies, state departments that you are talking about, and local municipalities to be involved in the performance accounting.

But in the state agencies, they would be able to set aside 75 percent of that savings as identified now by the Public Service Commission as verifiable energy savings, and roll that over into the next budget year to be able to invest in further savings. As I mentioned, the other 25 percent reverted to the state general fund.

I personally see perhaps a problem with that in that that doesn't build in enough incentive. Now I will speak as an administrator basically of a state agency also. If that 25 percent could be available to me, or in your case, could have been available to your institutions to use any way they saw fit, hire another employee to do this to do what, that I think would create further incentive. And I think that is the way to try to approach it so that in your case even though it was a 12 month return on that investment, I suppose if you could have assured them that you would support the same level of budget the following year and that they would then be able to use that additional money, a portion of it for further energy savings and a portion of it for other program efforts, why, then that might provide the incentive.

Senator EVANS. You all talked about different ways, or at least the different problems, in approaching the whole question of getting from what may be a good idea through the sometimes cumbersome process of the Federal contracting procedure and taking the most enthusiastic agency. Sometimes we lose the whole process in the way in which we do our contracting. Mr. Jackins, you talked about the importance or necessity of having an independent view from a consulting engineer's perspective. Mr. North, you represent a distinguished company that has presumably its own engineering talent and would perhaps approach it from a somewhat different point of view.

Is there any specific, right way—is it important, especially considering that it's the Federal Government and its agencies we are talking about, to begin with an independent view, as Mr. Jackins said, to develop the potential to identify the savings and then turn it over to the contracting procedure so the vendors and contractors might carry it out?

Mr. JACKINS. This has been the traditional method by which the Federal Government has gone about their procurement in the past. I think that it can remain the most effective way to make this process successful.

We are having great success with this, with institutions throughout the south, by pulling together these packages where they were not able because of procurement restrictions to make, let's say, deals with contractors where they felt comfortable.

Senator EVANS. Mr. North, what about you? Is it sufficient to have a company come in and analyze a company that has the product and the ability if used internally to both analyze and sell to do that?

Mr. NORTH. I think that either approach can end up being successful. I think the idea of having a consulting engineer involved in the beginning has been exercised by some of the agencies that are attempting to provide leadership roles in getting some of these shared energy savings projects up. I don't know the extent to which that has been done.

For instance, it is sometimes difficult to determine in a base period with a building what the energy consumption has been. And some of the buildings have not had measuring devices or metering devices installed. Then engineering estimates have to be employed. Sometimes this is done by hiring outside consultants. Sometimes it is done internally by engineers that work for the government.

I think there is a role for each. It can go either way. And I think this is one of the choices that an agency person has to make when they put together an implementation plan.

Senator EVANS. Is that one of the biggest difficulties? If we are moving toward any kind of a shared savings program or performance contracting or doing it in any one of the ways that Mr. Eckel had suggested—and I think that was good testimony to point out that these terms which we sometimes use interchangeably are really quite different. Is one of the biggest problems simply an accurate setting of the base so we know really what we are using today? Or can that fairly be done?

Mr. JACKINS. There are a number of factors that need to be addressed in bringing a successful deal to the table. And I don't know that all of those factors can be done without an independent, objective third party who is sitting there trying to represent both interests as they pull this thing together. And certainly with the complexities of these kinds of deals which go beyond just technical considerations, they involve very stringent administrative considerations, financial considerations. How do you determine what the shared savings are going to be so both parties are satisfied, and as well as legal considerations?

All four of these things have to be melded into this deal. And if you just have two parties heading into one another, are all four of these considerations going to be properly addressed?

Senator EVANS. For example, take a complex building of maybe 15, 20 years of age. From your experience, how accurately can you really measure total energy consumption and its various elements, taking into account the heating and cooling load, the number of degree days and the variance that you get from year to year and seasons?

Mr. JACKINS. I think our ability to judge the energy performance of buildings has become quite good in the past 10 years because we have had to do it for the first time. I would say at this point in time that there are a number of engineers who practice in this area who are pretty doggone good at telling you what will happen. I think that we tend to be conservative in our estimates, but the energy saving potential in public buildings is incredible, and remains to be incredible. But I would say we are getting pretty good at what we are doing.

Senator EVANS. I might just say in passing that when we did the analysis, which was to create an electric power plant in the Pacific Northwest in the next 20 years, the first thing that we decided was that we could not predict what the growth rate would be, but we could probably predict more accurately what the margins would be—the highest and the lowest—that we were likely to run into. Then the idea was to figure out all of the resources necessary so that wherever the actual line fell, we had sufficient resources to meet it.

We came back with energy conservation or energy deficiencies able to meet well over 90 percent of the total needs even at a moderately high growth rate in electric consumption over the next 20 years. So, I agree with you. The potential is extraordinary.

And I don't know. Mr. North, how fast are we moving toward even newer technologies to save energy that would give us even broader horizons or does the speed of research sort of parallel the price of oil?

Mr. NORTH. I'm sorry, Senator. I can't make a judgment about that. But certainly if there has been a major area of technical advance in recent years, it is on the electronics side and in the software side. And probably the next plateau from our point of view is going to be more along the lines of expert systems where we are going to help the human side in operations and maintenance and attempt to get more predictive in taking care of equipment that can go wrong and that can lead energy conserving practices astray.

I would like to point out to you on your earlier question, sir, that it has been my experience in working with the shared energy savings implementation to date that the technical questions have been present, but the major barrier that needs to be overcome is the adaptation on the procurement side of the Federal acquisition regulations in making it fit.

I think one of the most readily helpful things that could happen is that we could get some pilot projects up and functioning. And then I think we would reach another plateau where some of these technical difficulties will obtain center stage. But at this point in time, I think the primary work that needs to be done is on the procurement side.

Senator EVANS. It seems to me that knowing what I do about Federal Government procurement, the last thing in the world we tend to move toward is something that I think industry has commonly moved toward. And that is the concept of turnkey type projects where we want to detail every conceivable thing to avoid making a mistake I guess is the easiest way to put it where industries say that is not our business. We want somebody who does know how to do the business to handle the whole thing for us and give us the product we want and the price we want.

Mr. NORTH. Yes, sir. I agree.

Senator EVANS. And that's essentially the direction you think we need to move?

Mr. LONG. On that earlier question, I would agree with both what Mr. Jackins said and what Mr. North said. I think in Michigan's experience I might add that I have Jan Patrick who is a staff person for the Michigan Commission who really knows this stuff better than I do available here. But I think she has certainly convinced me that it is the human element. The technology is there. And I think the accuracy is there now sufficient enough.

But what we have been trying to do is now, built upon the knowledge base, use that and try to get the institutions, if you will, the people that ultimately will make the decisions, to put it into a university arena or local school district to feel comfortable enough with it, and feel comfortable enough with the private people they are dealing with to have confidence to make the decision and move ahead.

There does need to be that third party. At least that is what we have experienced—where because there is not enough knowledge and confidence and, quite honestly, trust I suppose in the private sector coming to that public entity saying, boy, have we got a deal for you to launch into that, nor has there been enough experience. We are building on that now. So, again, through our associations, the Michigan Hospital Association, for example, again through some of our efforts now will have the expertise themselves as an association to offer to the hospitals within Michigan that kind of third party review, if you will, of the contracts as they look at them. And that we think will provide the real kind of reassurance of moving ahead.

Senator EVANS. I think you are really hitting on it. One of the problems is—the difficulty I guess—the way in which the government has operated for so many years. We traditionally tend to be forced into far too complex a set of guidelines and structures in order to prevent mistakes. And as a result, we don't do, and as a further result, can't achieve or don't achieve the kinds of savings and simplicity that many in private industry do.

Mr. Long, do you think if we move in that direction, if we were to move toward and find ways to maybe have the analysis done by an independent party or have that kind of person, Mr. Jackins or one of his colleagues, and then from having identified what the potential is, move towards the kinds of contracts that would be more of the turnkey type or of a simpler type as far as the government is concerned? At that point do we maybe have to veer a little bit away from penchant of government always being required to accept the low bid?

Mr. LONG. I think definitely. I think Mr. Eckel pointed out that there are all kinds of varieties of agreements, if you will. And he identified the difference and the distinction. And the world changes around us. Technology changes. The financial community will react to either different congressional actions involving tax laws and so forth or just plain the economy changing. And therefore, I think you need that flexibility. And very definitely, I think that we need to move away from that—the more preciseness.

Senator EVANS. If you had to really be looking for the best response, as opposed to just the lowest price response, how do you figure we can do that from the government perspective without getting into more trouble than we commonly get into?

It is easy for the private industry. They want to get the best job done, and they can make a decision. We like bidder number 3 because we think when you measure price against competence, we have got more confidence that this job will be done and done right.

Mr. LONG. The others can respond probably better than I. From a public perspective—and I am a public official, you know, in the State of Michigan—I think as long as we are expected to be able to identify the factors that went into our decision as to why we chose perhaps not the least—the lowest bid, if you will, but the elements that we did base our decision on, maybe longer term efficiencies or quality or the experience of the contractor, or whatever, as long as we can document why we made the decision we did, I think then we are accountable and we can defend the actions we took. And

therefore, I think that it is wrong for government to impose a requirement that would say you must receive the lowest bid.

Senator EVANS. How about comments from the others?

Mr. JACKINS. I agree with that.

Senator EVANS. You're working from the other side of the fence there.

Mr. JACKINS. Right. I agree with Mr. Long. I think we have matured enough in this process now that we—and we still have a long way to go obviously, but we can be subjective about the qualifications of the contractors who are responding to these packages, and the packages can be appropriately structured where a subjective analysis can be made where they are not going to fuss if they are not going to get the project, even though they may be the low bidder. I think we are getting there very effectively.

Senator EVANS. Could you have or do you have suggestions you might give to us as to the nature of or what kinds of things we need to put into a proposed contract so that somebody who may have what they consider the lowest bid but not chosen would still walk away happy?

Mr. JACKINS. We worked under the Brooks law, as you know, and we are frequently retained by Federal agencies based on qualifications rather than fee. And I think that this is a good subjective way of selecting the best guy for the job. This is certainly an appropriate way to look at these kinds of projects.

Senator EVANS. Mr. North.

Mr. NORTH. Senator, my feeling is that within the current structure of the Federal acquisition regulation that we have the wherewithal to get the job done where there will be a balancing of qualification and price. I don't see that as a barrier, sir.

Senator EVANS. Mr. Eckel, you mentioned the three quite different elements here in financing. You said that the third, the lease financing, was the easiest. And I can understand that it is the easiest because there is no shifting of responsibility. The financier has to deal with credit risks and the investment risks but not the shared savings. But probably from the government's viewpoint, or from the other side of the table, there is an interest in getting it done and getting it done without having to make a large investment. And that gets back to probably the first or the second as being maybe more preferable under——

Mr. ECKEL. Yes. The question is how much risk you want to take for how much return.

Senator EVANS. Yes.

Mr. ECKEL. They are obviously working in inverse directions.

I think the way to maybe satisfy us rather than optimize, and I think by taking a satisfying role, you would increase—the total number of conservation projects would be to identify a set of technologies that are reasonably mature, easily implemented and relatively low risk, and just say, okay, we are going to do these. These all have the three, four, five year payback, and then stop fussing with baseline measurements and actual year-to-year computations of savings.

A lot of time shared savings deals die of their own weight. There is some elegance in the shared savings concept, but it is also very cumbersome to finance. Anytime you want to bring third party

capital into a transaction, that deal is already complicated enough. And so an LTOP structure provides a means to get the capital in there, get the equipment in there. And yes, it does take some of the risk and put it back onto the Federal Government.

But I think when shared savings was originally conceived, I don't think it was perceived how much risk the third party was actually taking. They had all the risks. And I do not think that is necessarily the best way to achieve energy conservation, to take all of the risk and put it on a third party.

If the problem is a lack of capital, we can get capital in there. If the problem is risk, that's a different question. You may be able to handle that through an operations and maintenance contract or a set-off provision in the lease. But the very cumbersome shared savings calculations sometimes do die of their own weight. And as a businessman, we keep it simple. And let's do as many of these things and save as much money as we can, but let's not worry about the last nickel or the last 20 percent.

Senator EVANS. Mr. Jackins, if you were going in the direction of shared savings, would shared savings be more practical in areas where you have a well-defined and easily measured situation?

Mr. JACKINS. Well, I think he made an excellent point, is that the risk is the controlling factor of how you go. And if I were to sit down with a client and try to determine how practical a shared savings deal might be for that particular client, if he is trying to put 100 percent of the risk off on a third party, then I would say he has very little possibility or potential for success of making a deal.

I think that the risk has to be balanced in these kinds of deals, and the Federal Government and the Federal agencies involved with these kinds of propositions are going to have to be aware of what their participation is going to have to be and what risk they have got to accept in order for this to be successful, as with anybody who would get involved in a shared savings deal.

I have not seen one work yet where the building owner said come in and save energy and give me part of what you save, and I don't want to be involved. It will not work under those circumstances.

So, I think in order to make sure that both of the parties who are coming to the table understand fully what their responsibilities are going to be, there has to be a balancing of this risk and responsibilities or I don't think that anything we are talking about today will be successful.

Senator EVANS. Mr. North, have you operated from Honeywell's experience in all of these methods of financing? Or what is most common in the way you operate? What is most successful I guess rather than common?

Mr. NORTH. Yes, sir. The traditional approach of sharing energy savings and making, if you will, a very frequent calculation of what the savings were and splitting the difference is very adversarial in nature. And that is not only one of the reasons that it has become unpopular. The other side of it is that there were tax incentives that were driving third party investors at the time this approach was popular.

Today these projects have to stand on their own merits economically. It gets to be a question of how much energy can you save.

And I think the experience that we have had to date with implementation of the new authority is that the contracts have been too one-sided as they have been brought to the table by the government. And the best advice that I could give is that the government should not mandate a specific financial approach and should let that develop as part of the project. My recommendation would be hang loose, guys. Be more flexible.

Senator EVANS. So, actually the development of the project could proceed ahead and the methods of financing really evolve as the project evolves?

Mr. JACKINS. Right.

Mr. NORTH. Yes.

Mr. JACKINS. Absolutely.

Senator EVANS. Mr. Eckel, in your view does the Federal Government need to make special efforts to attract investors to finance, especially some of the large energy efficiency projects in Federal facilities?

Mr. ECKEL. There is plenty of money, and as soon as the structure is put in place, there is no shortage of capital. The Fort Drum cogeneration project is one example, and I think our Rockwell/DOE is another example of the large projects will get financed as soon as the structure is set in place where their credit risks are manageable.

Senator EVANS. Are we going to get a change in all of that if the Congress takes another look at PURPA and decides that cogenerators who create electricity and utilities required to buy it at what sometimes are higher rates than they would like to—if we were to change purpose so that they didn't have to buy at those so-called avoided cost rates, is that going to have a real negative effect on some of these large energy savings projects?

Mr. ECKEL. In terms of cogeneration, it will have a very dramatic effect, some of which is already being responded to in the market in anticipation of some legislative change. You will see a lot of cogenerators looking at retail displacement rather than the classic PURPA machine of selling to a utility above the marginal cost. We will be coming in and displacing a PEPCO or a VEPCO retails sales, which will be equally contentious five years down the road when the utilities figure out that that is not something that they like either.

Senator EVANS. No. But at least it seems to me that that is a pretty clear cut and straightforward decision. If I am a retail purchaser of electricity and figure out a way to purchase less because of either cogeneration or energy savings, that is pretty legitimate. If in a cogeneration project I create a lot more electricity than I really need to reduce my own bill and sell it back at a price far above the price that the utility could get it from somewhere else, then I think we have got——

Mr. ECKEL. There is no question that selling above avoided cost does not achieve the goals that were originally——

Senator EVANS. Well, technically I suppose under PURPA they have to sell back at avoided cost, but the avoided cost calculation is a phony calculation.

Mr. ECKEL. Right.

Senator EVANS. In my view what is the avoided cost for a utility that has 40 percent excess capacity? I would suggest the avoided cost today to a utility is zero.

Mr. ECKEL. Or the avoided fuel on the margin.

Senator EVANS. Yes.

Mr. ECKEL. The problem with retail sales displacement is cogeneration companies will come in and essentially cherry pick the prime industrial loads, and those will be the high load factor customers and the ones who really keep the utility system at a high capacity factor and cost down. Certainly I think probably 30 states have outlawed retail sales by third party cogenerators. So, it is difficult.

Senator EVANS. I would think the retail sales by third party cogenerators would be difficult. Avoiding the retail sales for the cogenerator itself, that's another thing.

Mr. ECKEL. That's difficult.

Senator EVANS. Mr. North, you were mentioning the flexibilities that we need to seek. Do we need to change the law or modify or add to what we are doing here to achieve that? From your experience, is that something we could do if we would only have courage and willingness to do it under current law?

Mr. NORTH. I am not in a position to say whether there are changes that are required, Senator, but I certainly feel that government managers, agency managers, if you will, need some encouragement to do something about the energy saving potential and implementation of the new program. And I would certainly encourage that kind of direction to come out of this sort of process.

On the other hand, I think the idea of incentives is offset by people doing what makes good solid sense for them to do. And some of that grows out of not so much the carrot but the stick. And we need some structure.

And what I would recommend to the consideration of the managers involved is that these long-term goals whether it is 10 percent, or whatever it happens to be, be translated then into midterm, if you will, milestones so you can measure progress, and then short-time measurable objectives which have one and two year horizons because you have to be able to measure what you want to manage. So, I think there is a discipline side, and there is an incentive side.

Senator EVANS. Thank you all very much. It has been a very interesting and very worthwhile panel.

And it is hard sometimes, especially from my own perspective, and as I say, as a governor, then a manager of a state agency, and as chairman of the Pacific Northwest Power Council and, Mr. Jackins, years ago as a consulting engineer, it is frustrating to know that there is an extraordinary potential for savings. And we have got to find the trigger to help make it all happen. This has been very helpful in that. Thank you very much.

And with that, this hearing is adjourned.

[Whereupon, at 11 a.m., the hearing was adjourned.]

[The Georgia Society of Professional Engineers submitted the following:]

GEORGIA SOCIETY OF PROFESSIONAL ENGINEERS
TWO NORTHSIDE 75 - SUITE 212 - BETA BUILDING ATLANTA, GEORGIA 30318 (404) 355-0177
Affiliated with National Society of Professional Engineers

REPLY TO: ENERGY ACTION COMMITTEE
THE GEORGIA SOCIETY OF
PROFESSIONAL ENGINEERS
P. O. DRAWER 8 1 2 2 6
ATLANTA, GEORGIA 30366
(404) 458-9131

30 JULY, 1987

UNITED STATES SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
WASHINGTON DC 20510-6150

SUBJ: SENATE SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

RE: HEARINGS FOR S.1382, 30 JULY:

"FEDERAL ENERGY MANAGEMENT IMPROVEMENT ACT"

ATTN: HON. J. BENNETT JOHNSTON
COMMITTEE CHAIRMAN
HON. HOWARD M. METZENBAUM
SUBCOMMITTEE CHAIRMAN
HON. DANIEL J. EVANS
U.S. SENATOR
HON. WYCHE FOWLER, JR.
U.S. SENATOR

HONORABLE CHAIRMAN, SENATORS, COMMITTEE MEMBERS, AND STAFF:

THE UNDERSIGNED HAS BEEN INVITED TO REVIEW THE PROPOSED LEGISLATION AND TO OFFER COMMENT REGARDING THE ACCEPTANCE AND IMPLEMENTATION OF THIS AMENDMENT TO THE NATIONAL ENERGY CONSERVATION POLICY ACT.

THE UNDERSIGNED IS PRIVILEDGED TO COSPONSOR ON BEHALF OF EAC/GSPE THIS AMENDMENT; MY REMARKS WILL BE BRIEF AND TO THE POINT OF THE HEARINGS:

1. GOVERNMENTAL AND INDUSTRIAL LEADERS KNOW THAT THE US IS NOT ADEQUATELY EFFICIENT IN THE OPERATION AND MANAGEMENT OF OUR NATIONAL PHYSICAL PLANT AND ASSOCIATED FACTORS OF PRODUCTION NOR IN THE OPERATION AND MANAGEMENT OF THE "COMMUNITY OF FEDERAL BUILDINGS," WHICH THIS LEGISLATIVE EFFORT INTENDS TO AMELIORATE.

2. PREVIOUS LEGISLATIVE EFFORTS HAVE BEEN ESSENTIALLY UNSUCCESSFUL DUE TO INADEQUATE POLICY CRITERIA AND NATIONAL LEADERSHIP. UTILITY CONSERVATION DISINCENTIVES AND BUREAUCRATIC INERTIA ARE THE REAL ENEMY OF S.1382 AS THERE ARE NO TECHNICAL ISSUES PREVENTING REAL ENERGY AND ECONOMIC PERFORMANCE HEREBY, BENEFITING ALL INVOLVED.

3. OUR NATIONAL RESERVES/FOREIGN ENERGY CONSUMPTION SITUATION WILL NOT IMPROVE WITHOUT THE CREATION AND IMPLEMENTATION OF WORKABLE NATIONAL PROGRAMS WHICH BY ACTUAL LEADERSHIP AND PERFORMANCE DEMONSTRATE THAT NATIONAL POLICY ACTUALLY IS FOR MEANINGFUL CONSERVATION/MANAGEMENT MEASURES; THIS HAS NOT BEEN THE CASE.

4. THE AMMENDMENT MUST EMPHASIZE RESOURCE RECOVERY OBLIGATIONS IN THE POLICY, PURPOSE AND INCENTIVES SECTIONS, SEC. 542,543, & 548.

CONGRESSIONAL LIAISON SUBCOMMITTEE

FRANK D. PARKER, JR.
COCHAIRMAN, CONGRESSIONAL LIAISON SUBCOMMITTEE, EAC/GSPE

UNITED STATES SENATE
COMMITTEE ON ENERGY AND RESOURCES
SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

HEARINGS ON S.1382, 30 JULY, 1987: "FEDERAL ENERGY IMPROVEMENT ACT"

RESOURCES AND UTILITIES MANAGEMENT PROGRAM FORMAT

INDUSTRIAL UTILITIES MANAGEMENT CONSULTANTS HAVE INCORPORATED SYSTEMS ENGINEERING TECHNIQUES FOR THE SUCCESSFUL DEVELOPMENT AND IMPLEMENTATION OF POWERHOUSE UTILITIES COST REDUCTION PROGRAMS FOR FEDERAL AND STATE GOVERNMENT, HOSPITALS, AND INDUSTRIAL FACILITIES WHICH HAVE EVOLVED AS AN INCREMENTAL PROJECT APPROACH TO ACCOMPLISHING PROGRAM TASKS AND VERIFYING PROGRAM ACHIEVEMENTS THAT CORRESPOND TO THE BUDGET CYCLE AND CLIENT POWERHOUSE UTILITIES COST REDUCTION GOALS.

FIVE PHASE PROGRAM FORMAT:

PRINCIPAL CATEGORIES	PROGRAM DEVELOPMENT PHASE	PROGRAM IMPLEMENTATION PHASE	PROGRAM OPTIMIZATION PHASE
MANUAL PROGRAM PROBLEM IDENTIFICATION DEFICIENCIES RESOLUTION POWERHOUSE UTILITIES TREND ANALYSES INITIAL UTILITIES PERFORMANCE MEASUREMENTS	PHASE I		
REFIT AUTOMATE INSTRUMENT ENERGY SYSTEMS' PERFORMANCE MEASUREMENTS RELIABLE UTILITIES EFFICIENCIES MODELING		PHASE II	
POWER FACTOR CORRECTION POWERHOUSE WASTE HEAT RECOVERY POWERHOUSE EQUIPMENT SCHEDULING DEMAND LIMITING/LOAD MANAGEMENT PROCESS WASTE HEAT RECOVERY		PHASE III	
COGENERATION AND THERMAL STORAGE WASTE STREAM RECLAMATION/RECYCLING ALTERNATE FUELS AND ENERGY SOURCES POWERHOUSE EFFICIENCIES OPTIMIZATION			PHASE IV
COMPREHENSIVE FACILITY-INTEGRATED UTILITIES MANAGEMENT PROGRAM - OPTIMIZED 1ST AND 2ND ORDER EFFICIENCIES			PHASE V

APPENDIX

RESPONSES TO ADDITIONAL COMMITTEE QUESTIONS

Department of Energy
Washington, DC 20585

September 9, 1987

Honorable Howard M. Metzenbaum
Chairman
Subcommittee on Energy Regulation
and Conservation
Committee on Energy and Natural
Resources
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

On July 30, 1987, Donna Fitzpatrick, Assistant Secretary for Conservation and Renewable Energy appeared before the Subcommittee on Energy Regulation and Conservation to discuss the Federal Energy Management Program and S. 1382.

Following the hearing, you submitted written questions for our response to supplement the record. Enclosed are the answers to those questions, which also have been sent to the committee staff.

If you have any questions, please have your staff call Mike Gilmore or Becky Thompson on 586-4277. They will be happy to assist you.

Sincerely,

Robert G. Rabben
Assistant General Counsel
for Legislation

Enclosures

POST-HEARING QUESTIONS AND ANSWERS

Relating to the

July 30, 1987 Hearing

Before the

COMMITTEE ON ENERGY AND NATURAL RESOURCES

SUBCOMMITTEE ON ENERGY REGULATION AND CONSERVATION

WITNESS: DONNA R. FITZPATRICK

QUESTIONS FROM SENATOR METZENBAUM

TITLE VIII NECPA

Question 1: Title VIII of NECPA was intended to authorize the broad concept of shared savings contracting and thereby permit the federal government sufficient flexibility to enter into a variety of third party financing options. Is this broad authority clear to federal agencies and are they using it?

Answer: Through an initiative of the Secretary of Energy, all major and key minor Federal agencies have been apprised of the existence of Title VIII of NECPA. In addition, the Assistant Secretary for Conservation and Renewable Energy, assisted by FEMP staff, has been conducting a series of briefings with each of these agencies to further explain the concept of shared energy savings, to outline its advantages and offer FEMP assistance on an individual agency basis in implementing Title VIII. The status of the progress on the use of this authority is answered in a following question.

QUESTIONS FROM SENATOR METZENBAUM

TITLE VIII NECPA

Question 2: Do you believe further action is needed by Congress to clarify that "shared savings" is broadly defined, if so, what specific action would you recommend?

Answer: No legislative change is required at this time. Enactment of P.L. 99-272 provided the principal opportunities necessary to implement shared savings in the federal sector. Additional legislative changes could slow the process of implementing shared savings, necessitating integration of the results of current efforts at regulatory reform into new authorities. Further, it takes time to implement new laws because the performance-based nature of shared energy savings agreements, where the government repays private financiers, changes the standard procurement process. DOE, and its federal colleagues, are working to smooth out the implementation of shared energy savings projects.

QUESTIONS FROM SENATOR METZENBAUM

TITLE VIII NECPA

Question 3: Have the necessary regulatory changes been made to implement Title VIII of NECPA, and if so, have agencies been notified? If not, when will these changes be made?

Answer: It has not been necessary to initiate regulatory changes in order to implement Title VIII of NECPA. If, in the future it becomes necessary to revise pertinent Federal Acquisition Regulations (FAR) we would work with GSA to coordinate needed changes.

QUESTIONS FROM SENATOR METZENBAUM

TITLE VIII NECPA

Question 4: What specific plans do you have for further implementation of Title VIII of NECPA; for example, has DOE developed training and educational materials for agency procurement officials, has DOE defined the financial options available to agencies, and has DOE cooperated with GSA in making necessary regulatory changes?

Answer: In providing assistance to federal agencies, DOE has learned much about their needs and of the individual tasks which must be completed if performance contracting and third-party arrangements are to become commonplace within the federal establishment. As a result of these lessons, FEMP's future efforts will include development of: a range of financing options to be considered by federal agencies; a range of technical options which could be used by federal departments in planning for improved building energy performance; education curricula to be used by agencies in training facilities managers and procurement specialists; and an information series on such diverse topics as the relationship of dollar to energy savings, model contracts, leases and utility agreements, PURPA and the sale of excess energy, costing key contract terms, and negotiating with an Energy Service Company. In addition, FEMP will continue to provide direct assistance to federal colleagues wishing to improve their facilities' energy efficiency.

QUESTIONS FROM SENATOR METZENBAUM

TITLE VIII NECPA

Question 5: Please report on the progress of each of the major agencies, including DOE, on the implementation of shared savings projects and indicate objectives for 1988.

Answer: As of mid-July, 1987, there were twelve shared energy savings contracts in various stages of development as follows:

- Navy has one contract under negotiation (NTC/Bldg. 3400, Great Lakes, Ill.); one contract being authorized for bid (NAVHOSP, Long Beach, CA); one contract to be advertized in the Fall of 1987 (Trident Training Activity, Bangor, Washington) and, one contract as follow-on after, Bldg. 3400 (NTC/Basewide, Great Lakes, Ill.)

- Air Force has one contract out for bid (Seymour Johnson, AFB, Goldsboro, NC); one contract about to be advertized for bid (Bergstrom AFB, Austin, Texas); and, one contract to be advertized in the Fall of 1987 (Norton, AFB, Ontario, California).

- Army has one contract out for bid (Corpus Christi Army Depot, Corpus Christi, Texas); and two contracts being prepared for bid (Fort Bliss Medical Facility and Fort Sam Houston Training Facility in Austin and San Antonio, Texas).

- The Department of Housing and Urban Development has entered into an Inter-Agency Agreement with U.S. Department of Energy to jointly develop a contract on the HUD Headquarters building for bid in the Fall of 1987.

- U.S. Postal Service has prepared a request for proposal postal facility in San Diego, CA., that was released for bid August 18, 1987.

- In December of 1986, DOE's In-house Energy Management Program sent a memorandum to DOE field offices requesting nominations for a DOE pilot test of Shared Energy Savings.

DOE received nominations from the following sites for shared savings pilot tests:

- Lawrence Berkeley Laboratory (LBL)
- Lawrence Livermore National Laboratory (LLNL)
- Oak Ridge Associated Universities (ORAU)
- Savannah River Plant (SRP)
- Princeton Plasma Physics Laboratory (PPPL)

The following is the status of each of the five potential projects:

- A detailed study of the savings potential in Building 62 has been completed. DOE has funded $90,000 at LBL for initiating the pilot test at Building 62.

- LLNL has provided preliminary calculations for potential projects for three buildings that have been identified for the pilot test. A more detailed study will be necessary.

- ORAU is completing work on a detailed study that will identify projects for the shared energy savings pilot test. This study will be completed by October 1987, and a decision will be made at that time for conducting the pilot test.

- Both the SRP and PPPL sites have identified cogeneration projects to be accomplished under shared energy savings. Neither of these projects have had detailed studies performed. Funding for these studies will be considered for FY 1988.

- During 1988, DOE/FEMP will continue to pursue targets of opportunity among Federal agencies that have not yet initiated shared energy savings projects.

QUESTIONS FROM SENATOR METZENBAUM

INCENTIVE PAYMENTS

Question 1: You stated in your testimony that the Department will study the idea of incentive payments to agencies as proposed in S. 1382. When do you expect to be able to report to the Committee on the Department's findings regarding incentive payments?

Answer: We are currently reviewing the various means by which agencies can retain a portion of the dollar savings which result from their energy conservation measures. "Savings" are in the form of avoided cost to the government and as such represent funds which would continue to be available for obligation according to the individual agency's appropriation. Each agency would be able to use these funds for further energy efficiency improvements or for purposes consistent with the agency's appropriation. Our primary interest in an incentive program would be to make sure that the agency or OMB does not reduce the energy budget of the facility manager by the full amount "saved" thereby eliminating the incentive for the energy manager to avoid the cost. We believe we can accomplish this through executive action and will work with the Office of Management and Budget to assess the need for and the most appropriate form of response. We plan to report to the Committee our findings on or about February 1, 1988.

QUESTIONS FROM SENATOR METZENBAUM

INCENTIVE PAYMENTS

Question 2: Please provide a legal analysis of whether or not authority currently exists to allow agencies to retain, beyond one year, a portion of savings resulting from their energy efficiency efforts?

Answer: Agencies with "no year" appropriations have the authority to use funds not obligated in the current year in future years. Those agencies with "one year" appropriations would lose the unobligated balances at the end of the fiscal year and would therefore not have those funds available.

QUESTIONS FROM SENATOR METZENBAUM

INCENTIVE PAYMENTS

Question 3: Do you believe that such incentive payments would result in greater federal energy conservation achievements?

Answer: We believe that allowing the agency to retain what it "saves" in energy cost can provide an additional incentive to encourage federal energy managers to conserve energy. We do not know if this additional incentive is necessary for an effective energy conservation effort, nor do we know how great an effect such incentives would have. We are continuing to examine these issues.

QUESTIONS FROM SENATOR METZENBAUM

INCENTIVE PAYMENTS

Question 4: A potential difficulty with an incentive payment program is verifying the savings. Do you believe that the Department of Energy would be an appropriate agency to verify that savings have resulted from specific agency energy conservation efforts?

Answer: The verification of energy savings would be left up to each agency if it chose to use that measure as the basis for a program of incentives. We do not believe that DOE or any agency should have the responsibility to verify the savings resulting from specific agency energy conservation efforts. Verification of savings is an integral part of each shared savings contract because it is the basis of the contractor's earnings.

QUESTIONS FROM SENATOR METZENBAUM

TARGETS

Question 1: You stated in your testimony that energy efficiency targets should be established after careful analysis. How long should such analysis take?

Answer: If energy efficiency targets are deemed necessary they should be established on an agency by agency basis. To establish such a target would require each agency to consider many variables which effect energy use, such as planned increases/decreases in mission activity, budgetary impact of retrofit measures, changing technology, etc. Such an analysis could take up to a year to complete.

QUESTIONS FROM SENATOR METZENBAUM

TARGETS

Question 2: Has your Office of Conservation and Renewables ever recommended energy efficiency targets since those of Executive Order 12003 expired in 1985? If so, please provide the draft recommendation.

Answer: The Department is currently considering the development of energy efficiency targets for federal agencies. We have not drafted a recommendation to establish targets.

QUESTIONS FROM SENATOR METZENBAUM

TARGETS

Question 3: Do you believe that such targets would result in greater federal energy conservation achievements?

Answer: We think that targets could help stimulate additional agency action; these targets should be established by each agency.

QUESTIONS FROM SENATOR METZENBAUM

STANDARDS

Question 1: Was the Office of Conservation and Renewable Energy consulted on the rollback of the federal automobile and building thermostat settings and if so what were the Office's views?

Answer: The development of Federal Property Management Regulations dealing with management of Federal buildings (including provisions regarding thermostat controls) was conducted under the auspices of GSA and a subcommittee of the Interagency Advisory Committee on Regulatory Review.

DOE/FEMP commented on the temperature provisions in a letter to Wolfgang Zoelner dated August 22, 1985. The following excerpt from that letter summarizes the Office of Conservation and Renewables view.

"From site visits the FEMP staff has made over the years, we have observed that most buildings increasingly have been operating with temperature settings at the upper end (or beyond) of the winter level (68 degrees) and the lower end (or below) of the cooling level (78 degrees). Just as lack of adherence to the 55 MPH speed limit has increased since the days of gas lines, so temperature settings have crept past the marks set in 1973. .There is nothing to prevent a similar occurence at the new settings, and, as a result, we are likely to get a greater usage increase than that prompted by a two degree adjustment."

Subsequently, in May 1986, DOE's Office of Management and Administration conveyed its concern to GSA regarding the relaxation of temperature restrictions as follows:

"Our primary concern centers on the proposed relaxation in temperature settings in Federal agencies. We believe the Federal Government should continue to follow a diligent energy conservation program despite the recent drop in oil prices. This practice will not only help us continue to promote the conservation theme throughout the country, but will help keep costs under control."

QUESTIONS FROM SENATOR METZENBAUM

STANDARDS

Question 2: What will be the estimated increase in federal energy costs as a result of each of these two rollbacks?

Answer: With respect to the rollback of federal building thermostat settings, and despite DOE's initial concerns, no quantifiable increase in federal building energy costs has yet been attributed to the relaxed temperature settings.

79-266 O - 87 - 6

QUESTIONS FROM SENATOR METZENBAUM

STANDARDS

Question 3: Assuming the earlier standard for federal automobile efficiency (4 miles per gallon above CAFE) remained in effect and CAFE had not been rolled back from 27.5 m.p.g., what would be the percentage increase in federal auto efficiency above the existing efficiency?

Answer: Under normal peacetime conditions, if the earlier standard for federal automobile efficiency (4 miles per gallon above CAFE) remained in effect and CAFE had not been rolled back from 27.5 m.p.g., the federal automobile fleet (comprised of some sub-compacts and the remainder in compacts, and some station-wagons with a switch to mini-vans) would have been achieving approximately 31.5 m.p.g., in 1985. The General Services Administration reports that Federal passenger vehicles acquired by the Federal Government in FY 1986 achieved an average of 29.2 m.p.g. A comparison between the existing 29.2 m.p.g., and the projected 31.5 m.p.g. indicates that achievement of a 31.5 m.p.g. level would have increased efficiency by 7.9 percent. We do not know what the increased cost of such an efficiency improvement might be.

QUESTIONS FROM SENATOR METZENBAUM

STANDARDS

Question 4: Assuming no changes in the federal automobile efficiency requirement, what percentage increase in efficiency do you anticipate over the next 10 years?

Answer: With a 28.7 m.p.g. baseline in 1985, the federal automobile fleet would be expected to operate at an efficiency of between 34.6 m.p.g. to 35.9 m.p.g. in 1995, for a 17% to 20% improvement over the ten year period.

QUESTIONS FROM SENATOR METZENBAUM

STANDARDS

Question 5: What is DOE doing to apply the Commercial and Residential Building standards to new buildings, and what is DOE doing to encourage energy efficiency in new buildings not covered by these standards?

Answer: DOE has issued a Notice of Proposed Rulemaking and received public comment on both the commercial and Federal residential standards. An Interim rule is currently being prepared for both of these standards for use in a demonstration period currently scheduled to be initiated in FY 1988. During the development of both of these standards, DOE has shared research results and worked closely with the private sector and States in the development of similar standards.

Office of Building and Community Systems' research and technology transfer programs regularly contribute to advances in energy conservation in new industrial type buildings not covered by the standards. Thermal envelope, window, indoor air quality, infiltration and ventilation, lighting and daylighting, and equipment research programs regularly interact with the design professions, builders, and owners groups to exchange information about research in progress and emerging research results.

QUESTIONS FROM SENATOR METZENBAUM

STANDARDS

Question 6: Do you believe that agencies should be expected to implement all energy efficiency improvements that have a pay-back period of one year or less?

Answer: It would appear reasonable in the near future to expect agencies to use shared savings contracting to accomplish high savings to investment ratio retrofits when federal funds are not available for those projects. Simple payback is not a cost effective way to prioritize projects; its use is generally restricted to elimination of projects whose simple payback is too long to merit further consideration. If agencies are required to use federal funds for such projects, unquantified impacts on other programs might occur, possibly outweighing the savings benefit from the funded project.

THE OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-8000

PRODUCTION AND
LOGISTICS

AUG 20 1987

L/EP

Honorable Howard M. Metzenbaum
Chairman
Subcommittee on Energy Regulation
and Conservation
Committee on Energy and Natural Resources
United States Senate
Washington, DC 20510-6150

Dear Senator Metzenbaum:

Thank you for your August 7, 1987 letter, which forwarded questions following up the hearing of July 30, 1987 on S. 1382. Our responses are enclosed.

We are pleased to have been able to assist the Committee in its deliberations on S. 1382. Do not hesitate to contact me or the Director, Energy Policy, Mr. Jeffrey A. Jones, if we can be of further help.

Sincerely,

for John J. Kelly, Jr.
John A. Mittino
Deputy Assistant Secretary
(Logistics)

Enclosure

Response to Questions

1) Q: "What are DoD's energy efficiency goals and how long did it take to develop them?"

Answer: The DoD energy conservation policy contains three basic elements: 1) a basic policy, 2) an implementation plan with specific goals, and 3) assignment of lead-agency responsibilities for basic technology applications. The basic policy goal of DoD, as published in August, 1986, is as follows:

"It is DoD policy to improve mission support capability and reduce energy costs, while maintaining or improving Defense personnel living and working environments, by reducing energy consumption, increasing efficiencies, and substituting alternate fuel sources where cost-effective and practical..."

I. Existing Facilities. Reduce FY 1995 energy use (BTU per gross square foot) by 10 percent in existing structures, compared to FY 1985. Exceptions: Navy's goal is 12 percent; Army's goal is 8 percent. Exceptions based on FY 1975-1985 performance.

II. New Facilities. Reduce 1995 energy use (BTU per gross square foot) by 10 percent over FY 1985, based on comparative engineering/design improvements.

GOAL QUALIFICATIONS:

a. Only projects that are life cycle cost-effective, practical and which provide effective mission support are to be undertaken.

b. The baseline for all measurements is FY 1985 raw consumption data.

c. Electricity conversion to BTU will be computed using the "site" factor of 3,413 BTU per kilowatt hour.

d. Process energy (industrial use) may be reported separately, as per existing DoE regulations.

e. Regression analysis of energy use is encouraged. Regression equations have been developed by the Services to "normalize" raw consumption data for high-correlation variables, such as weather severity, base population changes, etc. When these methods are perfected, it is DoD's intent to adopted "normalized" consumption data in place of raw data in order to minimize distortions caused by exogenous factors.

III. Energy Conversion. Provided that conversion results in life cycle cost reductions, the DoD Components should seek to convert 5 percent of existing thermal plants to alternate energy sources (e.g. renewables, mixed sources and multiple fuel

designs) by 1995. The purpose of this goal is to maintain the ability to adopt new technology to DoD needs as economics and basic industry research and development make these technologies available.

IV. Mobility Energy. DoD sets a target of increasing the energy efficiency of traditional, air-breathing weapon systems by 5 percent by 1995, provided that no mission degradation occurs and that such improvements are life cycle cost-effective. The purpose of this target is to emphasize the opportunity to include energy saving technologies in system designs, not only to reduce costs but potentially to reduce combat fuel support needs.

The above policies were developed in 6 months.

2) Q: "What is DoD doing to apply the Commercial and Residential Buildings standards to new federal buildings and what is being done about other types of new buildings, those not covered by these standards?"

Answer: The Services have incorporated standards developed by DoE for residential and "commercial" type buildings into their design guidance. In addition the Services have for several years had guideline "Design Energy Budgets" for all basic categories of buildings which they design and construct. Architectural and engineering firms who design the facilities for the Services are instructed to follow the latest version of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) equipment and component standards. In addition they are instructed to include all cost effective aspects which will ensure that their calculated annual energy use per square foot of their design is equal to or less than the maximum allowable design use guideline of the "Energy Budgets." The Services have formed a tri-Service Committee to update these design standards to ensure that the latest cost effective techniques and components are incorporated as soon as possible wherever practical.

3) Q: "Has the Department developed standards for other types of buildings and if so, are they being used?"

Answer: The Services have developed energy usage standards guidelines for the design of their buildings and are applying them to all appropriate new construction.

4) Q: "What is DoD doing to implement Title VII of NECPA? Is DoD providing educational materials, hodling workshops, etc.?"

Answer: We have initiated a tri-Service steering group, chaired by the Navy, to coordinate the development of appropriate procurement procedures and documents and, through the use of "pilot" projects, provide guidance throughout the Department to standardize the contract process as much as possible without limiting the creativity of the private sector. The steering

group has been working extensively with industry to limit the "front end" cost of proposals and decrease as much as possible the risk inherent in these projects, which are difficult to specify. As soon as we gain actual execution experience with the pilot contracts, the steering group will sponsor workshops for both in-house and prospective contractor personnel.

5) Q: "What are DoD objectives in implementing shared savings in 1988?"

Answer: Through the pilot contracts, development of technical expertise and operational experience in this type contracting within the process governed by the Federal Acquisition Regulation (FAR). Once the experience is gained, it will be possible to develop a routine contracting procedure that will speed up future efforts.

6) Q: "Is it clear to DoD that shared savings authority is intended to be broad and to provide a variety of third-party financing options?"

Answer: We interpret the authority to permit performance contracting for energy savings, regardless of the specific implementing technology or type of installation, provided that reduced energy use is the purpose of the implementing contract. The Department intends to continue to use 10 U.S.C. §2394, which establishes procedures for third party financing of power plants on lands under the jurisdiction of a Military Department, rather than shared energy savings legislation, for those type projects.

General Services Administration
Public Buildings Service
Washington, DC 20405

AUG 28 1987

Dear Senator Metzenbaum:

Thank you for your inquiry of August 7, 1987, concerning S. 1382, Federal Energy Management Improvement Act.

As requested, enclosed are the responses to the questions asked in your letter.

Sincerely.

DUNCAN LENT HOWARD
Commissioner

The Honorable
Howard M. Metzenbaum
Chairman, Subcommittee on Energy
Regulation and Conservation
Committee on Energy and
Natural Resources
United States Senate
Washington, DC 20510

Enclosure

General Services Administration
Responses to Senate Bill S. 1382

Question 1: Have necessary regulatory changes been made to implement Title VIII of NECPA, if so, have agencies been notified of this fact, and if not, by what date will the necessary changes be made?

Response 1: There has been no necessary regulatory changes identified to implement Title VIII of NEPCA. Any changes that the Department of Energy (DOE) considers necessary will be coordinated among the Federal agencies. This is standard procedure in handling regulatory changes.

Question 2: What are your plans to encourage implementation of Title VIII of NEPCA and what are your specific objectives for 1988? For example, is GSA developing manuals or other informational materials so that agencies will have guidance from GSA on implementing performance contracts to reduce energy costs?

Response 2: The Department of Energy (DOE) is the agency that would be involved primarily in developing manuals or gathering informational materials. When DOE has developed the necessary manuals and information, GSA will share with other agencies as well as our internal field organizations materials or information concerning energy performance contracts that this agency may develop or obtain.

Question 3: In implementing Title VIII of NEPCA are you making sure that the broad set of third party financing options intended to be available will, in fact, be used?

Response 3: All options will be available for consideration in every project. The actual use of an option would depend upon the particular third party financing arrangement for a specific project.

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D.C. 20410

OFFICE OF THE ASSISTANT SECRETARY
FOR PUBLIC AND INDIAN HOUSING

SEP 25 1987

Honorable Howard M. Metzenbaum
United States Senate
Washington, DC 20510

Dear Senator Metzenbaum:

I was happy to send Ms. Chisholm to testify before your committee. Enclosed are the written responses you requested in your letter of August 7, 1987. I apologize for its lateness.

HUD-funded energy work for public housing over the past five years has totaled over $750 million. We think there is very exciting potential in public housing to work with the private sector to expand these efforts.

Sincerely,

J.E. Baugh

James E. Baugh, Ph.D.
General Deputy Assistant Secretary

Subcommittee on Energy Regulations and Conservation

Hearings on S 1382

Questions from Senator Metzenbaum

Q. 1. How much Federal funding is used each year for utility costs? (Subcommittee has a figure of $2 billion).

A. During FY 1986, HUD provided $1.2485 billion in operating subsidies. PHAs commingle locally generated income (rents) with federally provided subsidies to cover their operating expenses. The PHA's annual energy cost of $1.021 billion represents 34 percent of PHA operating expenses.

Q. 2. I understand that HUD has consented on two private financing projects by local PHAs to reduce their energy costs. Please tell us about these projects, and does HUD plan to encourage more PHAs to participate?

A.

a. HUD granted waivers of the PFS regulations to approximately 15 PHAs (including Knoxville, Nashville and Memphis) in the South serviced by TVA. TVA provided zero percent financing for the weatherization of public housing units. HUD permitted the amortization to be treated as a separate item of subsidy eligibility. Good data on the results is, at present, not available.

b. HUD granted waivers of the PFS regulations to permit the Brockton Housing Authority to enter into a shared-savings energy improvement program with a private non-profit company. The improvements have just been finished. Results will be available after the project has gone through a full heating season.

The Department is actively considering allowing PHAs to receive these incentives not as a result of a waiver but as a matter of course.

Q. 3. Would you please describe the intent of the amendment to HR 4 proposed by Congressman Kennedy and state whether you believe the amendment would encourage energy savings in public housing?

A. The amendment grants to the Secretary the authority to replicate the energy incentives provided to the Brockton Housing Authority and the authorities in TVA's jurisdiction. These arrangements encouraged energy savings. Nevertheless, since the Secretary already has the authority, the amendment is redundant.

Q. 4. I understand that Lawrence Berkeley Labs did a study which concluded that the current budget process for utility subsidy creates a disincentive for local PHAs to reduce their energy costs. Has HUD explored ways to eliminate this disincentive? Would an incentive program as proposed in S.1382 help HUD to encourage PHAs to reduce energy costs? And do you believe that HUD currently has the authority to implement such a program.

A. There are numerous incentives for energy conservation in place, being put in place or under active consideration.

The largest incentive is the CIAP program, which represents free money for the PHAs. Under that program, in which cost-effective energy improvements are given a priority, $750 million have been reserved for energy conservation over the last five years. In addition, as noted in our answer to Question 2, we have been giving waivers to our PFS requirements in the cases of shared-savings and subsidized financing arrangements.

HUD is changing its requirements so that all cost-effective energy conservation actions must be done when a project is comprehensively modernized. In addition, we are requiring energy audit updates to allow for more accurate assessment of various energy conservation actions.

There is now in place a policy of shared savings between HUD and the PHA which provides an incentive for PHAs to use the CIAP program for energy conservation and to do smaller energy items with their own funds. Under active consideration is a change in the written policies so that no waiver requests will be required for shared savings and non-federal financing arrangements. HUD is also considering fostering more aggressive shopping by PHAs for the lowest possible price for their energy by allowing PHAs to retain a portion of the savings when they obtain their energy at lower costs - for example by purchasing at the well-head or being involved in district heating arrangements.

Q. 5. Please comment on the HUD Headquarters federal building pilot project with DOE to develop a shared energy saving contract. What have you learned about it?

A. HUD has entered an Inter-Agency Agreement with the Department of Energy to jointly develop a shared energy savings contract on the HUD Headquarters building in Washington, D.C.

It is expected that the contract will be bid this Fall. One of the problems has been the development of an energy baseline on which HUD and a contractor can accept. The baseline identifies pre-retrofit energy use and provides the basis for measuring energy savings resulting from the contrator's work.

We have learned that it is difficult to develop an energy baseline that can be agreed to by HUD and a contractor. Energy use is in constant change and there are so many variables that affect energy use.

Honeywell

G.C. NORTH
Federal Market Manager

August 10, 1987

The Honorable H.M. Metzenbaum
United States Senate
Subcommittee on Energy Regulation and Conservation
SH212
Hart Senate Office Building
Washington, D.C. 20510-6150

Dear Senator Metzenbaum:

Here is my response to the three additional questions included in your August 7, 1987 letter.

QUESTION #1

In your testimony you recommended that agencies be given specific milestones to encourage the implementation of shared savings contracting. Would you be more specific? For example, should certain agencies make an effort to put out an RFP by a specific date, and do you believe that there are certain disadvantages to such micromanagement?

RESPONSE #1

Long term goals are desirable. S-1382 provides for a 10% savings goal for the period 1985-1995. My intent was to recommend managing long term goal achievement through establishing measurable medium term milestones and short term objectives. Shared savings fits nicely into such a structure.

For example, suppose an agency's plan for achieving a 10% long term goal calls for 8% from performance contracting. The agency could develop a prioritized list of shared savings projects, completion of which would satisfy the 8% goal. Medium term milestones could consist of a project completion schedule for years 1989, 1991 and 1993. Short term objectives for each project could then be developed, task within date (i.e. RFP by a specific date, etc.).

Building Services Division, Honeywell Inc., Honeywell Plaza, Minneapolis, Minnesota 55408, Telephone 612/870-5413

The disadvantages of such micromanagement are primarily implementational. Unless those responsible take ownership of the plan and are committed to its achievement, the plan won't happen. Another risk is too much stick (not enough carrot) can demotivate.

QUESTION #2:

Are you confident that many of the changes you recommend to enhance implementation of Title VIII of NECPA, such as changes to FAR and more flexible approaches in contract solicitation, are being made?

RESPONSE #2:

For two of the five NECPA Title VIII RFPs to date, contractor comments were solicited before issuance. It is my experience such comments were minimally reflected in the subsequent RFP. Based on this experience, my confidence is low.

Indirectly, I've heard agencies are intending to reflect contractor concerns in future RFPs. That remains to be seen.

It is my opinion agencies should solicit much more contractor input as they evolve the program. Not having done so is one reason RFPs to date have been unattractive to contractors.

It's premature to think all potential changes have been identified. No NECPA Title VIII contract has been negotiated or awarded. More such changes are likely to be identified as the implementation process continues. This is especially true with regard to major base-wide projects, none of which have been solicited.

QUESTION #3:

You stated in your appearance before the Committee that additional legislation changes were probably not needed, instead the difficulty in implementing Title VIII is overcoming bureaucratic inertia. In addition to hearings and questioning, do you believe that there are other specific actions the Committee could take to encourage shared savings contracting?

RESPONSE #3:

Bureaucratic inertia does appear to be an important implementational barrier. This is not to say, however, agency personnel are purposefully footdragging. To the contrary, many federal employees have worked hard to get the program going.

The primary focus of implementing agency people appears to be on satisfying copious government regulations (i.e. FAR). The problem is, performance cotracting is not a routine application of such regulations. I get the feeling agency personnel feel hamstrung by the regulations. Consequently, industry experience is not felt to apply to the federal sector. That's counterproductive.

The Committee can take these specific actions to encourage performance contracting:

(1) NECPA Title VIII may require FAR modification. I recommend the Committee specifically monitor procurement and contracting activities to assess how well government practice is being adapted to assure NECPA Title VIII is successful.

(2) There is a need for ongoing oversight (accountability) of NECPA Title VIII activity. Each agency needs goals, a plan for their accomplishment and micromanagement of measurable objectives. I recommend the Committee see to both; and

(3) If S-1382 does not pass, facilitate satisfaction of the need for agency incentives through alternative means;

Please advise if there are comments and/or questions.

Sincerely,

Skip

Grant C. (Skip) North

cc: Mr. A.P. Stayman
United States Senate
Subcommittee on Energy Regulation and Conservation
SH212
Hart Senate Office Building
Washington, D.C. 20510-6150

STATE OF MICHIGAN

COMMISSIONERS
William E. Long
Edwyna G. Anderson

JAMES J. BLANCHARD, Governor

DEPARTMENT OF COMMERCE
DOUG ROSS, Director

PUBLIC SERVICE COMMISSION
6545 Mercantile Way
P.O. Box 30221
Lansing, Michigan 48909

September 11, 1987

The Honorable Howard M. Metzenbaum, Chairman
Subcommittee on Energy Regulation and Conservation
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510-6150

Dear Senator Metzenbaum:

I appreciated the opportunity to testify regarding the Michigan experience with performance contracting and other incentive approaches for encouraging energy conservation investment in public facilities. The exchange of views about methods of overcoming institutional barriers and achieving higher levels of energy efficiency was, in my opinion, representative and educational.

Your follow-up request for detailed information about energy management incentives for state agencies has been delayed for two reasons:

1) The Public Service Commission is undergoing a major reorganization at this time and my staff resources are very limited; and

2) P.A. 122 which authorizes performance contracting and budgetary carryover of energy savings is in its implementation phase, having only been enacted on July 20, 1987.

Discussion of measurement and administrative procedures is underway, and agreement with the Department of Management and Budget is expected soon. Nonetheless, I will draw on our experience in assisting local public agencies with the performance contracting process and from monitoring the carryover of "savings" from utility budgets of state agencies in the past to respond to your three questions.

1) In Michigan, were a broad range of third party financing options authorized, and which of these options has been most useful to state agencies?

P.A. 122 of 1987 authorizes state agencies to enter into multiyear contracts for energy conservation improvements which would be paid for from avoided operating costs from utility service or fuel produced by the improvements. Under this authority, a broad range of financing options is possible, including "shared savings" plans, installment purchases and leasing arrangements.

In addition to the above-mentioned options, Michigan municipalities, school districts and community colleges may issue energy notes or enter into installment loan contracts for energy improvements with the sole approval of their governing body. Such obligations do not reduce the legal debt limit of these entities for other capital expenditures.

The performance contracts negotiated in Michigan to date have had a variety of financing structures. Generally, municipalities have favored the municipal (or financial) lease with an energy savings guarantee. School districts tend to favor a direct purchase of energy saving equipment but a performance-based installment purchase of the services needed to install and operate the equipment.

2) In developing a savings retention incentive program in Michigan, how were the problems of savings verification, and consideration by appropriations committees in the state legislature, dealt with?

The "savings" retention provisions enacted by the Michigan Legislature in 1982 (see P.A. 242 and 244, attached) permitted state agencies to carry over 75 percent of the unencumbered balance in their utility budgets for energy conservation projects. There was no requirement to verify that the balance was a ~~result of~~ energy management activity although clearly that was the legislative intent. Growing concern about the amounts of funds being carried over ($6 million over four years by three agencies) and the lack of proof that any of the carryover represented "energy savings" led to the removal of the incentive during a recodification of the public acts in 1985.

P.A. 122 of 1987 reinstates the savings retention incentive but with appropriate safeguards against potential abuse. Now, the Public Service Commission is responsible to provide state departments with an annual certificate of energy cost savings resulting from energy management actions.

This certification is to be based on actual energy use and cost data provided by the departments or agencies. While the verification methodology is not yet approved, it will include corrections for weather, occupancy, hours of operation, space reallocations, etc. It will not be a direct comparison of total consumption from year to year.

There is no legislative reporting requirement in P.A. 122, but the presumption is that the Public Service Commission certification records will be available for review by the Joint Capital Outlay Subcommittee.

3) Does Michigan have agency energy conservation goals, and if so, are they a useful tool in encouraging government energy efficiency?

No, energy efficiency targets or goals do not exist within state government. Approximately two years ago, the state began a major building project to construct eight correctional facilities. At that time, the

Legislature, in consultation with the Department of Management and Budget, decided to make no further appropriations for energy conservation projects. Without funding for energy improvements, reduction targets for state agencies are not feasible at this time.

The opportunity to access private investment capital through performance contracting arrangements and to re-instate the savings retention incentive is providing the means by which state agencies can continue to achieve greater energy efficiency in governmental operations. Technical assistance, peer education and recognition of achievement provide added incentives for sound energy management practices. During the next 12 to 18 months, we expect to have sufficient data on the impact of P.A. 122 to determine if stronger policy initiatives are indicated.

I hope this information will assist you. Please let me know if I can assist your committee in any other way.

Sincerely,

William E. Long,
Chairperson

WEL:drw
Attachment

Act No. 244
Public Acts of 1982
Approved by Governor
September 23, 1982

STATE OF MICHIGAN
81ST LEGISLATURE
REGULAR SESSION OF 1982

Introduced by Rep. Owen

ENROLLED HOUSE BILL No. 5279

AN ACT to amend sections 1 and 2 of Act No. 95 of the Public Acts of 1965, entitled "An act to prescribe general rules governing appropriations; and to repeal certain acts and parts of acts," section 2 as amended by Act No. 282 of the Public Acts of 1976, being sections 21.251 and 21.252 of the Compiled Laws of 1970.

The People of the State of Michigan enact:

Section 1. Sections 1 and 2 of Act No. 95 of the Public Acts of 1965, section 2 as amended by Act No. 282 of the Public Acts of 1976, being sections 21.251 and 21.252 of the Compiled Laws of 1970, are amended to read as follows:

Sec. 1. As used in this act:

(a) "Unencumbered balance" means the remainder of an appropriation after deduction of recorded operating expenditures and outstanding encumbrances.

(b) "Operating expenditure" means charges incurred for work performed, supplies and materials delivered, services rendered, and grants-in-aid and debt service due, whether or not payment has been made.

(c) "Encumbrance" means future liabilities in the form of purchase orders, contracts, or pledges which will become payable when goods are delivered or services rendered.

(d) "Work order" means an undertaking for the purpose of constructing, remodeling, or adding to or making major repairs to buildings, structures, or improvements.

(e) "Work project" means a 1-time nonrecurring undertaking for the purpose of accomplishing a specific objective, but does not include a work order.

(f) "Energy conservation measure" means the installation of equipment or materials in a building for the purpose of reducing energy consumption or allowing the use of a renewable resource.

Sec. 2. (1) Except as provided in subsections (4) and (5), at the close of the fiscal year, the unencumbered balance of each appropriation lapses and reverts to the state fund from which it was appropriated. The central books of state accounts shall remain open for a period of not less than 30 days after the end of the fiscal year to allow for the recording of ascertainable documents properly applicable to the fiscal year. A document which is not ascertainable prior to the closing of the central books of state accounts for the past fiscal year may be charged against a current year's appropriation if the chief accounting officer of the state, in keeping with standard practices of governmental accounting, determines that the agency of state government was not wilful in its failure to ascertain or report the document.

(2) The director of the department of management and budget shall submit preliminary, unaudited financial statements of the state general fund, including a balance sheet, analysis of fund balance, and

statements of revenues and expenditures to the senate and house appropriations committees within 75 days after the end of the fiscal year.

(3) The director of the department of management and budget shall submit final financial statements, notes to the financial statements and footnotes and comments related thereto, including balance sheets, analysis of fund balance, and statements of revenue and expenditures of the state general fund and the state school aid fund to the legislature within 120 days after the end of the fiscal year.

(4) The unencumbered balance of state appropriations to state departments and agencies specifically for fuel and utilities shall be distributed as follows at the close of each fiscal year:

(a) Twenty-five percent of the balance shall revert to the state general fund.

(b) Seventy-five percent of the balance shall be carried forward into the following fiscal year and shall be allocated to a special energy conservation work order or work project account, to be used for energy conservation measures in facilities of the state department or agency, to which the initial appropriation was made, subject to allotment of the funds by the state administrative board on recommendation of the director of the department of management and budget.

(c) The balance in a special energy conservation work order or project account at the end of the fiscal year shall be carried forward into the following fiscal year until September 30, 1987.

(d) Any unexpended balances remaining in the special energy conservation work order or work project accounts on September 30, 1987, shall revert to the state general fund.

(5) An amount shall not be expended for an energy conservation measure or work account, pursuant to subsection (4), unless the energy conservation measure or work account has a simple payback period of 6 years or less which period shall be computed by dividing the estimated cost of the measure by the estimated annual energy cost savings from the measure.

(6) Within 60 days after the close of a fiscal year a department which has carried forward balances for an energy conservation measure or work account shall report the following to the joint capital outlay subcommittee for each measure or account:

(a) The account number and name of each energy conservation measure or work account.

(b) The balance remaining in each account.

(c) The date of last expenditure from the account.

(d) The estimated date of substantial completion of the measure or work account.

(e) The appropriations history for the measure or work account.

(f) The total cost for the measure or work account.

(7) A measure which will require the services of a professional service contractor and will cost more than $25,000.00, shall not be started unless it is approved by the joint capital outlay subcommittee and the department of management and budget.

This act is ordered to take immediate effect.

Thomas S. Husband

Clerk of the House of Representatives.

William C. Faville

Secretary of the Senate.

Approved .....

.....

Governor.

Act No. 242
Public Acts of 1982
Approved by Governor
September 23, 1982

STATE OF MICHIGAN
81ST LEGISLATURE
REGULAR SESSION OF 1982

Introduced by Rep. Owen

ENROLLED HOUSE BILL No. 5280

AN ACT to amend sections 8, 9, 10, and 11 of Act No. 98 of the Public Acts of 1919, entitled as amended "An act to establish a budget system for the several activities of the state government; to prescribe the powers and duties of the state administrative board in relation thereto; to create the office of budget director and prescribe his powers and duties; to provide that said director shall be furnished with information by the several state departments, institutions, boards, commissions and offices relating to their financial condition and needs, receipts and expenditures, and general affairs; to regulate legislation relating to appropriations; to prescribe the manner of financing all activities of the several departments, institutions, boards, commissions and offices of the state government; to provide punishment for refusal or neglect to comply with the requirements of this act; and to repeal all acts and parts of acts inconsistent with the provisions of this act," section 10 as amended by Act No. 29 of the Public Acts of 1982, being sections 21.8, 21.9, 21.10, and 21.11 of the Compiled Laws of 1970.

The People of the State of Michigan enact:

Section 1. Sections 8, 9, 10, and 11 of Act No. 98 of the Public Acts of 1919, section 10 as amended by Act No. 29 of the Public Acts of 1982, being sections 21.8, 21.9, 21.10, and 21.11 of the Compiled Laws of 1970, are amended to read as follows:

Sec. 8. All departments, institutions, boards, commissions, and offices of the state government are subject to the provisions of this act and, except as hereinafter provided, shall each be wholly supported and maintained by specific appropriations by the legislature, following the submission to the legislature of the budget herein provided, containing the recommendations of the budget director. The game and fish divisions of the department of natural resources, in all their activities, shall be wholly financed from the game and fish protection fund, which fund shall be estimated by the budget director and set up in the budget and specifically appropriated for such purposes by the legislature. The bureau of aeronautics, in all its activities shall be wholly financed from the state aeronautics fund, which fund shall be estimated by the budget director and set up in the budget and specifically appropriated for such purposes by the legislature. The state transportation department, in all its activities, shall be wholly financed from the Michigan transportation fund, which fund shall be estimated by the budget director and set up in the budget and specifically appropriated for such purposes as are provided by law. State departments and agencies shall be permitted to finance energy conservation measures in state facilities from 75% of any unencumbered funds previously appropriated specifically for fuel and utilities in state facilities, if those funds are allotted for that purpose by the state administrative board on recommendation of the director of the department of management and budget.

Sec. 9. All departments, institutions, boards, commissions, and offices of the state government except state departments and agencies in expending money under special energy conservation work orders or from work project accounts established for state departments and agencies to fund energy conservation measures in state facilities, and except the university of Michigan and Michigan state university, shall hereafter be wholly financed and maintained by specific appropriations by the legislature, and except that eastern Michigan university shall continue to receive such income as it may derive from its interest fund. Except as herein otherwise provided, the state treasurer shall not issue warrants on the state treasury and the state treasurer shall not pay money out of the state treasury for any specific purpose when funds have not been specifically appropriated for that purpose, or the expenditure of funds for that purpose has not been provided for by some legislative enactment or contemplated by the legislature, but warrants shall be issued and payments made from the state treasury only in pursuance of specific appropriations made by the legislature, and for the purposes for which the appropriations were made. The state treasurer shall not issue warrants on the state treasury and the state treasurer shall not pay money out of the state treasury when an appropriation, to which the expenditures if made would be charged, is exhausted, either from the proper use of the total amount of the appropriation or because the appropriation or balance of the appropriation has been unencumbered at the end of the fiscal year and has reverted to the state general fund under the law of this state. This section does not prevent the allowance and payment of emergency claims out of any fund or funds provided therefor, nor prevent any institution, department, board, commission, or office from accepting gifts, grants, bequests, or any assistance whatsoever from private sources or from the United States government, in the furtherance of the purposes of such institution, department, board, commission, or office. Funds shall not be released by the state administrative board for building purposes, except in case of fire, flood, or other calamity, unless and until the following conditions have been met:

(a) The entire amount of money necessary for the completion of the contemplated building project, or a complete unit of a building project, are available in cash in the state general fund before the contract is let for the building project or unit of a building project.

(b) The release will not create or add to a deficiency in the state general fund.

Sec. 10. (1) Except as otherwise provided in this section, all revenue of the state government, from whatever source derived, shall be deposited into the state treasury by the state department, institution, board, commission, or office which collects or receives the revenue, and credited to the general fund. All revenue shall be deposited on or before the first day of each month following collection or receipt. However, the revenue of the game and fish protection fund, the homeowner construction lien recovery fund, the state aeronautics fund, and the Michigan transportation fund shall not be credited to or revert to the general fund.

(2) Funds shall not be placed to the credit of any state institution in the state treasury unless specifically authorized by law, and then only upon warrant of the state treasurer and for the purpose named in the appropriation or governing statute. The state treasurer may refuse to draw a warrant upon the state treasury for any funds requested by a state department, institution, board, commission, or office unless a satisfactory showing is made that the funds requested are actually needed at the time and in the amount named in the request.

(3) Funds needed by a state department, institution, board, commission, or office shall be credited to the appropriation account of the department, institution, board, commission, or office in the state treasury upon warrant of the state treasurer. The amount credited shall only be paid out of the state treasury upon check-vouchers signed by the executive officer of the department, institution, board, commission, or office the form of which check-voucher shall be prescribed by the department of treasury. All funds credited to an appropriation account under this subsection shall be used by a department, institution, board, commission, or office strictly for the purpose specified in the appropriation act and pursuant to the requirements of the general accounting laws of the state. However, each state institution shall be permitted to establish and maintain a petty cash account in an amount which the state treasurer considers necessary and expedient, but the amount of each account shall not exceed the sum of $500.00.

* [(4) Until September 30, 1987, state departments and agencies shall be permitted to establish and maintain a special energy conservation work order or work project account to be used to fund energy conservation measures in the state facilities which are occupied by those state departments and agencies.

(5) This section shall not apply to revenue derived by the university of Michigan and Michigan state university from sources other than specific appropriations.

(6) This act shall not be construed to impair the continued existence of a revolving fund now existing. The state treasurer shall keep separate account of all revolving funds, and shall pay revolving funds out of the state treasury pursuant to this section. Any profit accruing from the use of any revolving fund shall be placed to the credit of that fund.

Sec. 11. The state administrative board, through the budget director, shall cause the several appropriations made by the legislature to the several state institutions, departments, boards, commissions, and offices to be divided into allotments, based upon the periodic requirements of these governmental units. An institution, department, commission, board, or office shall not exceed the allotments. Neither the state administrative board nor any state institution, department, commission, board, or office shall incur operating costs in any fiscal year in excess of appropriations made by the legislature. Neither shall the state administrative board nor a state institution, department, commission, board, or office have authority to apply or divert any money to any work or purpose whatsoever other than as specifically specified in the appropriation, except for those funds appropriated in a special energy conservation work order or work project account to be used for energy conservation measures in state facilities, without the specific authority of the administrative board. A debt shall not be contracted, nor any financial obligation incurred, by or on behalf of the state by the state administrative board or any state institution, department, commission, board, or office, in excess of the appropriation made by the legislature or authorized by law. A debt shall not be created or authorized in behalf of the state by the state administrative board or any state department, institution, commission, board, or office unless the creation of the debt is distinctly authorized by law, and neither shall any specific appropriation of the legislature be used or applied for any other purpose than as specified in the appropriation, without the specific authority of the state administrative board. The budget director may authorize the purchase of supplies and materials, from a revolving fund hereby established, for maintaining institution inventories to ultimately be charged to appropriation allotments on the basis of actual usage. A violation of this section by any state department, institution, commission, board, or office shall be reported promptly by the legislative auditor general to the attorney general, and disciplinary action taken as provided in section 13.

This act is ordered to take immediate effect.

Thomas S. Kleckner

Clerk of the House of Representatives.

William C. Kendler

Secretary of the Senate.

Approved .....

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Governor.

energy management consultants, inc.
consulting engineers / energy conservation / maintenance management

87 SEP -8 PM 12:20

September 3, 1987

The Honorable Howard M. Metzenbaum
Chairman-Subcommittee on Energy
Regulation and Conservation
United States Senate
Washington, D.C. 20510-6150

Dear Senator Metzenbaum:

It was my pleasure to represent the consulting engineers of America in expressing our views on the federal energy management program, and S.1382, at the subcommittee hearing on July 30, 1987. We were most appreciative of that opportunity.

In response to you letter of August 7, 1987, I have attached our responses to the additional questions from the subcommittee. Please don't hesitate to contact me if we may be of further assistance in this matter. We have great interest in your legislation.

Yours very truly,

George A. Jackins

George A. Jackins, Jr., P.E.
Chairman - Energy Committee
American Consulting Engineers Council

GAJ:jr
attachment

158 Business Center Drive
P. O. Box 360687, Birmingham, Al., 35236 / phone 205 - 985-9090

RESPONSE TO QUESTIONS FOR GEORGE JACKINS ON S. 1382

Question: 1) In your statement you say that Section 802 of Title VIII, NECPA, is a problem because it provides that no agency may obligate funds beyond a single fiscal year. There appears to be a misunderstanding. Section 802 states that no agency may make payments in any year except from appropriations for building expenses. Could you be more specific regarding the "inconsistency" of Section 802 and recommend what changes, if any, would be needed to correct it?

Response: 1) Public Law 99-272, Title VIII, Section 802 specifically states - "any amount paid by a Federal agency pursuant to any contract entered into under this title may be paid only from funds appropriated or otherwise made available to the agency for fiscal year 1986 or any fiscal year thereafter for the payment of energy expenses (and related operations and maintenance expenses)."

There are basically two problems that could face prospective energy services contractors due to the manner in which this section is presented:

1. An energy services contractor who would be responsive to a Federal agency request to enter into a shared savings agreement would either use his own funds or borrowed funds to implement the energy conservation measures proposed. In any event the contractor and/or the lender would want some assurance that a level appropriation would be available to the Federal agency during the period of the contract. This section implies that, since these appropriations are made annually, there could be a change that has a negative impact on the expected cash flow stream to pay off the amount of the contract. This uncertainty has caused contractors and lenders to consider the risk to be too high to respond to Federal agency RFP's for shared savings agreements. Considering the limits of the Federal procurement system, some provision must be made so that the contractor does not have to assume this risk as well as the risk that savings will not occur. (i.e. - multi-year contracts, Federal loan guarantees, etc.).

2. Another concern in this regard is the fact that appropriations are made to the Federal agency "for the payment of energy expenses". The whole purpose of the

contract is to reduce energy costs. If reduced energy costs result in reduced appropriations, the contractor has no means of being paid. If Section 802 were taken literally, this could happen. The law must make provision for the agency to, again, have level appropriations so that savings can be assured to pay the cost of making the energy improvements.

(Please see copy of referenced Title attached)

Question: 2) You point out that the federal government has expended well over $30 million to pay for energy studies of its buildings. To your knowledge have these studies formed a basis for third party financing projects? If not, why not, and what could be done to attract private investors to potential projects identified in energy studies?

Response: 2) Virtually every Federal facility has had an energy study performed on it during the past ten years. The expense of these studies has been too significant for the investment to be wasted. Indications are that these studies remain on the shelf while Federal agency administrators seek third party financed energy conservation projects.

Part of the problem seems to be a lack of confidence by the administrators in these studies. The rest of the problem is just the indifference to the opportunity of using this resource.

Most of these studies would make excellent foundations for third party or shared savings agreements. At the very least, they should be used to identify the projects the agency wishes to implement. A study can also provide the contractor with a better understanding of the facility and a preliminary assessment of the economics of the project.

By all means, these studies should be utilized to seek third party investors in energy conservation projects in Federal facilities. They should be used as the initial enticement to interest contractors in projects with little cost to the government.

Question: 3) Considering the potential market that energy efficiency projects represent to the engineering community, has ACEC taken a formal position and made recommendations on developing the federal shared savings program?

Response: 3) The Consulting Engineering community has started to become extensively involved in the process of structuring shared savings deals for their clients. This new process is so complex that frequently an intermediary between the owner and contractor is necessary to insure both parties concerns are fully addressed. This is a traditional role that the consulting engineer has played for many years for the Federal government.

ACEC, recognizing the potential market for its members, is currently evaluating a formal position and established policy to govern their involvement in such projects. We still feel strongly that the consulting engineer remains the "missing link" between the Federal agency and the contractor to insure shared savings projects have the best opportunity for success. We would welcome any opportunity continue to work with the Federal government in refining this process.

attachment

9/2/87

PL 99-272

(430)

TO: ENERGY COMM
COGEN. COMM

FR: ED BAJER

RE: FYI
THIS IS NOW
FEDERAL LAW.

Subtitle C—Federal Energy Conservation Shared Savings

SEC. 7701. SHARED ENERGY SAVINGS.

(a) IN GENERAL.—The National Energy Conservation Policy Act (42 U.S.C. 8201 and following) is amended by adding at the end the following new title:

"TITLE VIII—SHARED ENERGY SAVINGS

"SEC. 801. AUTHORITY TO ENTER INTO CONTRACTS.

"The head of a Federal agency may enter into contracts under this title solely for the purpose of achieving energy savings and benefits ancillary to that purpose. Each such contract may, notwithstanding any other provision of law, be for a period not to exceed 25 years. Such contract shall provide that the contractor shall incur costs of implementing energy savings measures, including at least the costs (if any) incurred in making energy audits, acquiring and installing equipment, and training personnel, in exchange for a share of any energy savings directly resulting from implementation of such measures during the term of the contract.

"SEC. 802. PAYMENT OF COSTS.

"Any amount paid by a Federal agency pursuant to any contract entered into under this title may be paid only from funds appropriated or otherwise made available to the agency for fiscal year 1986 or any fiscal year thereafter for the payment of energy expenses (and related operation and maintenance expenses).

"SEC. 803. REPORTS.

"Each Federal agency shall periodically furnish the Secretary of Energy with full and complete information on its activities under this title, and the Secretary shall include in the report submitted to Congress under section 550 a description of the progress made by each Federal agency in—

"(1) including the authority provided by this title in its contracting practices; and

"(2) achieving energy savings under contracts entered into under this title.

"SEC. 804. DEFINITIONS.

"For purposes of this title—

"(1) the term 'Federal agency' means an agency defined in section 551(1) of title 5, United States Code, and

"(2) the term 'energy savings' means a reduction in the cost of energy, from a base cost established through a methodology set forth in the contract, utilized in an existing federally owned building or buildings or other federally owned facilities as a result of—

"(A) the lease or purchase of operating equipment, improvements, altered operation and maintenance, or technical services; or

"(B) the increased efficient use of existing energy sources by cogeneration or heat recovery, excluding any cogeneration process for other than a federally owned building or buildings or other federally owned facilities.".

(b) TABLE OF CONTENTS.—The table of contents of such Act is amended by adding the following at the end:

"TITLE VIII—SHARED ENERGY SAVINGS

"Sec. 801. Authority to enter into contracts.
"Sec. 802. Payment of costs.
"Sec. 803. Reports.
"Sec. 804. Definitions.".

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